

# THE BIRDS OF KING ISLAND

WITH REFERENCE TO OTHER WESTERN BASS STRAIT ISLANDS  
AND ANNOTATED LISTS OF THE VERTEBRATE FAUNA

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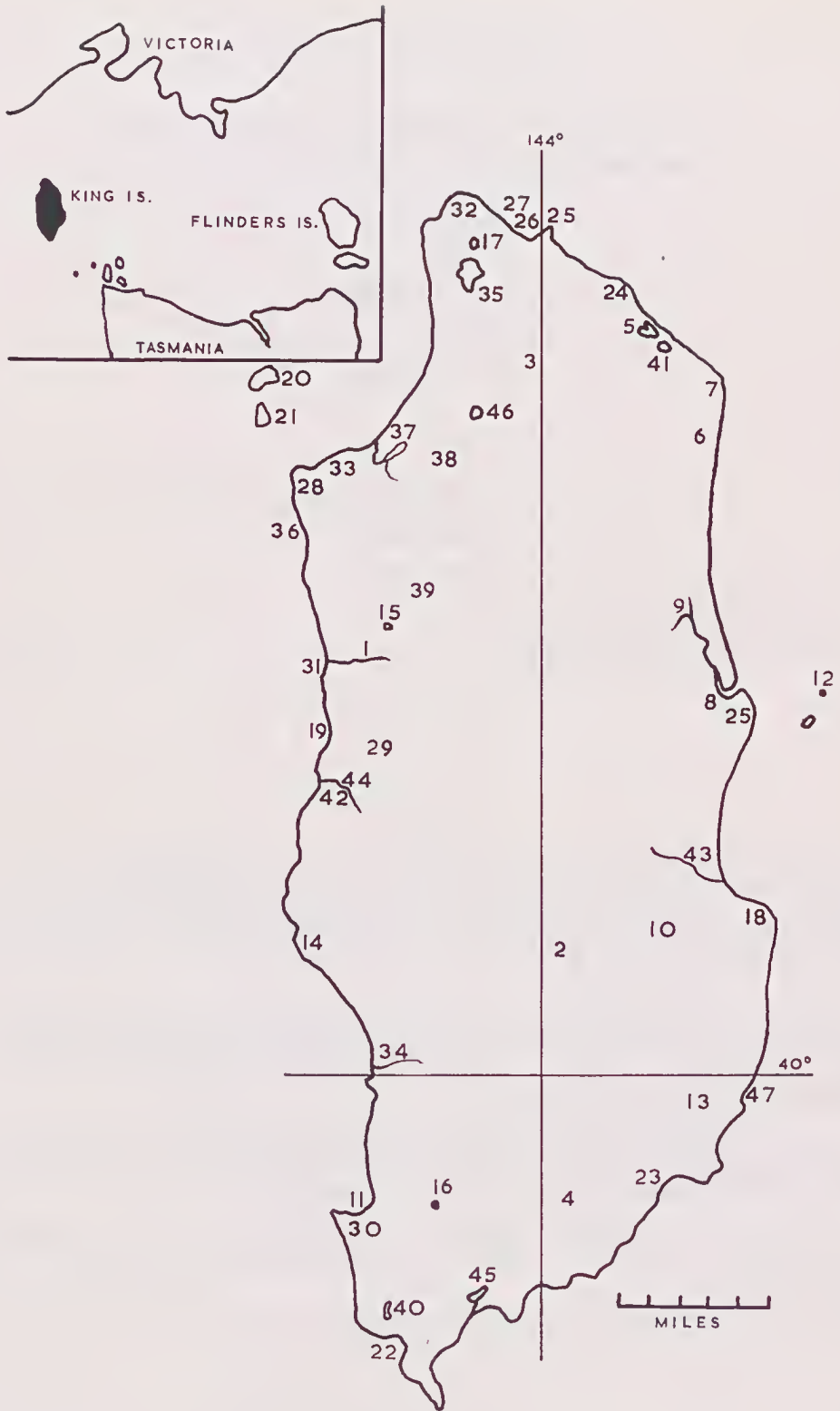
## ABSTRACT

A brief study of the birds on King Island was undertaken by the Queen Victoria Museum during three visits in 1967 and 1968 when 224 bird specimens were collected. One of us (A.M.McG) has resided locally and kept ornithological records for ten years. As a result, 143 bird species are recorded from King Island and its coastal waters. Seventy-five species have been found to breed locally.

Habitat alteration since the invasion of European man has been extensive and severe with the result that one bird species has become extinct. Several species have disappeared from the island and others have been reduced considerably in numbers. Species dependent on grassland have benefited from pastoral improvement.

Several mainland Australian species which do not occur in Tasmania are seen regularly on King Island while some sedentary species which occur in south-eastern Australia and Tasmania are absent.

Observations on mammals, amphibians and reptiles are also recorded. A list of the gut contents of the birds collected during the study is given in the appendix.





west  
~~East~~ coast pastoral country looking north from Pass River. The river flows westwards and at this point is about one and a half miles from the sea. Nankeen Night Herons nest in the trees in the foreground.

King Island, western Bass Strait. Places mentioned in the text are as follows:

- |                 |                      |                   |                     |
|-----------------|----------------------|-------------------|---------------------|
| 1 Pass River    | 12 Councillor Island | 25 Point Cowper   | 37 Yellow Rock      |
| 2 Pegarah       | 13 Yarra Creek       | 26 Rocky Cape     | River               |
| 3 Egg Lagoon    | 14 Currie            | 27 Disappointment | 38 Yambacoona       |
| 4 Mt. Stanley   | 15 Tatham's Lagoon   | Bav               | 39 Reekara          |
| 5 Lake Martha   | 16 Pearshape Lagoon  | 28 Whistler Point | 40 Bowling's Lagoon |
| Lavinia         | 17 Little Cask Lake  | 29 Loorana        | 41 Pennv Lagoon     |
| 6 The Nook      | 18 Naracoopa         | 30 Cataraque      | 42 Porky Creek      |
| 7 Lavinia Point | 19 Porky Beach       | Point             | 43 Fraser River     |
| 8 Sea Elephant  | 20 New Year Island   | 31 Unlucky Bay    | 44 Porky Lagoon     |
| 9 Sea Elephant  | 21 Christmas Island  | 32 Cape Wickham   | 45 Big Lake         |
| River           | 22 Surprise Bay      | 33 Yellow Rock    | 46 Bob's Lagoon     |
| 10 Forestry     | 23 Grassy            | 34 Ettrick River  | 47 City of          |
| Reserve         | 24 Boulder Point     | 35 Lake Flannigan | Melbourne Bay       |
| 11 Fitzmaurice  |                      | 36 Duck Bay       |                     |
| Bay             |                      |                   |                     |

## INTRODUCTION

King Island lies in the western approaches to Bass Strait, approximately 55 miles south south-east of Cape Otway, on the Victorian coast and 53 miles north-west of Cape Grim, north-west Tasmania. It was joined to Tasmania and Victoria by landbridge when the sea level dropped during the Pleistocene (Jennings 1959a) and in Tertiary times (Bock and Glenie 1965). Its present isolation makes the affinities of the fauna of particular interest, and its geographical position makes it an obvious "stepping stone" for birds which migrate between Victoria and Tasmania. Peron (1804) gives some brief but interesting details of the island and its fauna at the beginning of the nineteenth century before the local fur seals and elephant seals were annihilated.

The Field Naturalists' Club of Victoria conducted an expedition to King Island in November 1887, the party comprising 27 men of varying interests. Almost three weeks were spent on and round the island during which the tracks of the party on land were estimated to cover 160 to 170 miles, much of which was in difficult country. A. J. Campbell (1888) gives an account of this expedition with lists of the mammals, birds, reptiles, amphibians, insects and flora observed, many specimens of which were collected and preserved. A. G. Campbell (1903) expanded the bird list after a visit in November 1902. The Australian Ornithologists' Union visited the island during their Bass Strait expedition in 1908 (White 1909). The ecology and evolution of the avifauna of the area are discussed by Ridpath and Moreau (1966). The present publication is the result of an attempt by the authors to assess the status of the vertebrate fauna, as alteration to the environment will no doubt produce even greater changes in the near future.

## METHODS AND SOURCES OF DATA

Green made three visits to King Island: alone 11-15 December 1967; with J. W. Swift (technical assistant) 19 February - 1 March 1968; and alone 23 September - 2 October 1968. The visits in December and September were principally exploratory but some collecting was undertaken. The February visit was devoted mainly to collecting in the areas of the Pass River and Pegasus, with particular attention given to the sedentary birds. A total of 224 bird specimens were collected. Local residents were interviewed on all three visits.

Birds and mammals were collected mainly by shooting and netting, the surplus netted birds being released unharmed after examination. Standard measurements, breeding and age data, stomach contents and ephemeral colours of the specimens were recorded and searches made for both external and internal parasites. All material and data collected has been lodged with the Queen Victoria Museum and registered numbers quoted are for that institution unless otherwise stated. A number of species were observed and recorded in addition to those collected. Some additional material, principally beach washed specimens, have been collected by local residents and deposited with the Queen Victoria Museum and the National Museum of Victoria.

McGarvie has lived at Egg Lagoon since 1958. He has studied the birds of the island and has kept records of sightings and migratory movements over the years. Mr. John Courtney of Swan Vale, N.S.W. has provided

his notes and knowledge of the fauna of the island. Mr. Malcolm Templeton of Looorana has forwarded results of his observations and numerous beach-washed specimens collected since 1968.

The bird nomenclature follows that of the R.A.O.U. Checklist (1926 edition with subsequent amendments. Names are followed by \* if the occurrence of the species is undoubted by the present authors and by (\*) if one or more locally collected examples are held in the collection of the Queen Victoria Museum. B is added if the species is known to be a local breeder. If the name is not followed by an asterisk the present authors consider the occurrence of the species now doubtful.

It is natural that time will produce additions to the present list especially from the migratory birds. The lack of references to oceanic species is the result of limited collecting and observations by competent ornithologists at sea.

#### HABITAT

King Island measures approximately 40 miles from north to south and sixteen miles at the widest point. The terrain is low and undulating, the highest point being Mount Stanley in the south-east which is 500 feet above sea level. The soil is variable but mostly light, ranging from sand to sandy loam (Stephens and Hosking 1932) and much of the coastal region is stabilised dunes formed during the Holocene (Jennings 1959b). Stephens and Hosking (1932) give some details of early settlement and land development, climatic features, geology, general physiography and a description of the soils. Jennings (1959b) discusses the coastal geomorphology and changing sea levels.

A. J. Campbell (1888) gives a good account of the habitat at that time, a notable feature of which was the dense wet sclerophyll forest of the south-east, most of which has long since disappeared. Even at this time of early settlement, Campbell (1888) referring to an area in the centre of the island states "Eastwards is the remains of a singular ancient forest, indicated by blanched, naked tree-barrels." Fifteen years later, A. G. Campbell (1903) states in part "the face of King Island has so altered during the last fifteen years that it may not be long before some forms are driven away or killed out, as a result of the opening up of the land for dairy farming and cattle rearing. Year by year the native timber (eucalyptus) is becoming less; even now it is a difficult matter to get sufficient for fencing purposes, and the only large tracts on the island, along the east coast, have been decimated by bush fires."

Campbell's 1903 forecast unfortunately has come true as all that now remains in evidence of the once splendid forests are a few huge, decaying eucalypt (*E. globulus*) stumps, some still standing to a height of 100 feet or more and some minor areas which have survived along water courses where the terrain has not been suitable for pastoral development or where some far-sighted resident has conserved a few acres. The disappearance of those forests likewise has been accompanied by the disappearance of some animal species and drastic reduction of others which are dependent on this habitat for survival.

Most of the country remaining undeveloped is in the western part of the island, much of which generally is considered poor and not economical for pastoral improvements. However, modern farming is helping to convert

to introduced grasses, areas which a few years ago would not have been considered worthwhile. Typical of this is an area to the south of Lake Martha Lavinia which at present supports a scrub-like habitat, the height of which is influenced by fires and in places may stand to fifteen feet. Principal vegetation includes stunted manna gum *Eucalyptus viminalis*, swamp bull-oak *Casuarina monilifera*, honeysuckle *Banksia marginata*, river wattle *Acacia mucronata*, manuka *Leptospermum scoparium*, smooth tea-tree *L. laevigatum*, pink swamp heath *Sprengelia incarnata*, common heath *Epacris impressa*, pink bearded heath *Leucopogon ericoides*, bracken *Pteridium esculentum*, parrot pea *Dillwynia floribunda*, guinea flower *Hibbertia fasciculata*, narrow sword rush *Lepidosperma elatior*, tassel cord-rush *Restio tetraphyllus*, native mistletoe *Cassytha pubescens*, dodder *Cuscuta tasmanica*, *Patersonia* sp. and a rush, possibly *Hypolaena* sp.

Between this scrubland and the east coast is a narrow stretch of dense wet sclerophyll forest known locally as The Nook and, though little more than a few hundred yards in width, it extends almost from Lavinia Point to Sea Elephant and follows a swampy watercourse which is a tributary to the Sea Elephant River.

Some parts of this habitat still appear to be in an original condition and, though fire has at times encroached in places, the wet understorey has protected much of it from destruction. On the northern extremity, near Lavinia Point, is a good area of eucalypt regeneration now about fifteen feet high and offering the possibility of improvement and expansion if protected. From the Sea Elephant River to Lavinia Point is one of the best natural areas on the island and much of it has recently been proclaimed a nature reserve.

The forestry reserve near Pegarah comprises 2470 acres which is managed by the Tasmanian Forestry Commission for the provision of fencing and other commercial timbers. As at the end of 1968, 450 acres were under *Pinus radiata* plantation, 734 acres were under eucalypts, mostly introduced *Eucalyptus obliqua* but including some areas of natural regrowth of *E. ovata*, *E. globulus* and *E. viminalis*. Of the remaining area about 200 acres are considered suitable for planting pines, the remainder being poor soil type not considered worth development at present (pers. com. J. Peterson). The undeveloped area carries dense scrub growing to 25 feet and includes *Eucalyptus* spp. regrowth, prickly Moses *Acacia verticillata*, river wattle *A. mucronata*, blackwood *A. melanoxylon*, honeysuckle *Banksia marginata*, lancewood *Phebalium squameum*, manuka *Leptospermum scoparium*, pink bearded heath *Leucopogon ericoides*, bracken *Pteridium esculentum* and *Monotoca scoparia*. The area is cut by several deep gullies in which the indigenous eucalypts are dominant, with some standing to well over 100 feet.

#### BIRD SPECIES LIST

King Island Emu *Dromaius minor* Extinct: A description and details of habitats of the King Island Emu was obtained by the French naturalist Péron during the visit of the Baudin Expedition in December 1802. At the time of their visit, the weather was very bad and the party was unable to see emus except the carcasses of several which the sealers had hung up for food.

A schedule of questions drawn up by Peron and answered by the resident sealers was published by Milne-Edwards and Oustalet (1899) and later by Brasil (1914). This gives some insight into the life and habits of the bird and indicates that it was smaller than the mainland species, being about four and a half feet high (1365 mm) and weighing up to 50 pounds (22.7 kg)

The plumage is stated to have been "quite black" in the adults.

Alexander (1921) has pointed out that Lieutenant Murray, of the "Lady Nelson", recorded in his log several allusions to the animals and birds of the island, including references to the emu. These observations were made in January 1802, eleven months before Péron's visit.

Peron (1804) includes illustrations (plates 36 and 41 drawn by C. A. Lesueur) of the Kangaroo Island emu. Mathews (1911) considers this incorrectly captioned, and he believed the standing bird to be of King Island origin. Brasil (1914) presents a case contradicting Mathews views and supporting the accuracy of the original caption.

Serventy (1967) has reproduced Peron's plate 36 as the "Black Emu of King Island (*Dromaius ater*)" and points out that Dr. Christian Jouanin (Natural History Museum, Paris) demonstrated in 1959, "that the mounted specimen of the dwarf black emu in their collection, which had hitherto been believed to be from Kangaroo Island, South Australia, originated in reality from King Island." There is no record of when the King Island emu became extinct but it appears to have been soon after the arrival of the commercial sealers in 1802 (Brasil 1914). They hunted it with trained dogs and used the meat to supplement their diet.

In addition to the mounted specimen mentioned above, a quantity of bones and egg fragments have been collected over the years from "wind blows" in the sandy soils. Some of this material is now in the Queen Victoria Museum. Spencer and Kershaw (1910a) describe a considerable accumulation of bones in various collections, most of which had been found on an area of sand dunes in the extreme south of the island (see their plate 1.). They demonstrate that *D. minor* was smaller in every feature than *D. novaehollandiae* of mainland Australia. For example, the femurs of adults range between 140 mm. and 180 mm. compared to 217 mm. to 243 mm. in *D. novaehollandiae*. Their measurements of other bones approximate this bias.

It was this character which, four years previously, prompted Spencer (1906) to describe it as a distinct species.

3. Rockhopper Penguin *Eudyptes chrysocome* (\*). Campbell (1888) records a specimen collected during the visit of the Field Naturalist Club of Victoria ( F.N.C.V. ) in November 1887. Sharland (1958) records one specimen from Tasmania. Two large penguins were found dead on Porky Beach, King Island during 1970. One (1970/2/61) collected on 12 July, has been determined as *E. c. mosleyi*, a juvenile male estimated at six to 12 months old. This subspecies comes from the Indian and Atlantic Ocean colonies (pers. com. K. G. Simpson). The other specimen, (1970/2/58) collected on 4 August has been spirit preserved and still awaits determination. The scarcity of records indicates that the large penguins rarely occur in these waters.
5. Little Penguin *Eudyptula minor* \*B. Common in adjacent waters. There is a rookery of about 2 acres at Fitzmaurice Bay and several smaller ones on the north coast. Councillor Island also supports a large rookery. In July 1970 one was found dead on Porky Beach. It had been banded as a nestling on Phillip Island, Victoria on 20 December 1969. (pers. com. M. T. Templeton)
9. Stubble-quail *Coturnix pectoralis* (\*)B. Common in area of crop and grassland.
10. Brown Quail *Synoicus ypsilophorus* \*. Very rare. McGarvie has seen only two individuals on the island.

12. King Quail *Excalfactoria chinensis* Several birds were caught at Pegarah and Yarra Creek about 1965 but it has not been possible to establish if they were of a natural population or aviary escapees.
14. Painted Quail *Turnix varia* \*B. Fairly plentiful in the ferny areas and found breeding at Ega Lagoon. (A.M.McG)
34. Common Bronzewing *Phaps chalcoptera* \* Rare on King Island. McGarvie (in company with J. Courtney) first positively identified this bird at the Nook in March 1967 and has since seen it on several occasions. Templeton saw one on the roadside near Currie on 14 July 1969.
35. Brush Bronzewing *Phaps elegans* (\*)B. Common throughout the island and often seen and heard in or near to the patches of tea tree and scrub growing along the creeks or lagoon edges. Individuals and pairs were regularly flushed from the access roads in the forestry reserve. Collected specimens were found to have been feeding on subterranean clover seeds and other seeds of somewhat similar appearance. McGarvie found nests of this species situated on the ground. Templeton found several nests with eggs and small young placed in old night-heron's nests at Pass River on 10 September 1969.
45. Lewin Water-rail *Rallus pectoralis* (\*). Occasionally seen throughout the island. McGarvie has seen individuals in his garden on three occasions in recent years. Templeton collected a road killed specimen (1970/2/19) at Loorana in April 1970.
46. Banded Landrail *Hypotaenidia philippensis* \*. McGarvie has occasionally seen and heard this bird on the east coast in the vicinity of The Nook and on nearby Councillor Island.
56. Dusky Moorhen *Gallinula tenebrosa* \*B. Two were present on Tatham's Lagoon during Green's visit in December. In February the lagoon was almost dry and, though other water birds were still plentiful, the moorhens could not be found. McGarvie (1965) has found this species on Tatham's Lagoon at other times. Templeton has provided us with the following observations: 19 January 1969, six on a lagoon at Yambaconda; 9 August 1969 two at Pearshape Lagoon; 31 October 1969, two at Porky Creek; 29 April and 7 May 1970, one subadult and two adults at Porky Creek; 15 June 1970, five at Porky Creek; 15 September 1970, one was flushed from a nest at Clemons Lagoon near Loorana. The nest was placed in limbs near the waters edge and was found to contain four eggs.

This bird has not been recorded from Tasmania though it does occur on Flinders Island (Green 1969)

58. Eastern Swampen *Porphyrio porphyrio* (\*)B. Plentiful on the tea tree lined swamps and lagoons throughout the island where it nests among the rushes and in the tea tree scrub. Eggs and half grown young were found by Green in December. Despite the dryness of the summer and receding water level in the lagoons during February, their numbers appeared unaltered.
59. Coot *Fulica atra* \*B. Usually plentiful on the larger lagoons. In December several dozen were present on most such expanses of water. About 70 were counted on Pearshape Lagoon where a pair were observed tending at least two small young. A pair were present on Tatham's Lagoon but these had abandoned the area by the following February. Green observed one gathering nesting material at Tatham's Lagoon on 26 September and the Tatham brothers recall it breeding there on several occasions. Templeton found about 100 on Clemon's Lagoon, near Loorana, on 2 July 1970, and about 200 on Bob's Lagoon, near Yambaconda, on 12 July 1970.



62. Hoary-headed Grebe *Podiceps poliocephalus* \*B. Usually plentiful on the lagoons throughout the island. In December Green found dozens on most inland waters. About 100 were present on Little Cask Lake and breeding has apparently just commenced. No young could be seen but six nests containing clutches of two or three eggs were found within thirty yards of the shore. Flotation tests showed them to be relatively fresh in most instances. Several platforms of green weed appeared ready for eggs. Breeding was not noticed on any other waters but McGarvie found them breeding on Pearshape Lagoon in October 1961. Birds were present on Little Cask Lake at the end of September but they had not commenced to nest.
65. White-faced Storm-petrel *Pelagodroma marina* (\*). Templeton collected a beachwashed specimen (1969/2/95) on Porky Beach on 17 August 1969.
68. Fluttering Shearwater *Puffinus gavia* (\*). Templeton collected a fresh beachwashed specimen on Porky Beach on 20 October 1969.
71. Short-tailed Shearwater *Puffinus tenuirostris* \*B. Very numerous in the adjacent waters during the summer months. Many hundreds were visible seaward from Martha Lavinia beach during Green's visit in December and similar sightings were made from Naracoopa on 29 September. New Year Island and Christmas Island once supported extensive rookeries but on New Year Island the rookery area is now exposed sand, possibly as a result of overstocking with sheep. It has been deserted by the birds. (pers. com. M. T. Templeton) Breeding on the mainland of King Island was once unknown. "The King Island News" of 1 April 1970 records some memories of the islands oldest resident, Mr. Hickmott Grave. He states that in his youth there were "no mutton bird" (*P. tenuirostris*) rookeries on King Island but a large rookery was worked on nearby New Year Island. This rookery was expanding about a chain a year at the beginning of this century. Eventually rookeries were established on King Island, first at Stokes Point and, later, just south of Wickham. In recent years at least a dozen rookeries have been established. The largest are at Surprise Bay and just south of Grassy. Each of these cover as much as 200 acres. Other rookeries are known at Boulder Point, Point Cowper, near Lake Martha Lavinia, at Rocky Cape and several places in Disappointment Bay, Whistler Point, on the coast west of Loorana, and on Cataraque Point. All evidence indicates that the rookeries are continuing to expand despite the annual harvest of young birds taken by the local residents for human consumption.
73. Grey Petrel *Procellaria cinerea* (\*). Templeton collected a beachwashed specimen (1970/2/38) on Porky Beach on 12 July 1970.
74. Silver-grey Petrel *Priocella antarctica* \*. A single beachwashed specimen was salvaged by McGarvie at Lavinia Point on 14 November 1959 and sent to the National Museum of Victoria. (McGarvie 1965)
75. Great-winged Petrel *Pterodroma macroptera* (\*). A beachwashed specimen was found by Templeton on Porky Beach in the first week of August 1968 and sent to the National Museum of Victoria. On 22 June 1969, he collected another decomposed specimen (1969/2/42) in the same area.
77. White-headed Petrel *Pterodroma lessonii* (\*). As a result of regular patrols along Porky Beach, Templeton collected two (1969/2/55 and 57) on 12 July 1969, one (1969/2/70) on 8 July 1969, two (1969/2/89 and 90) on 17 August 1969 and one (1970/2/20) on 12 July 1970.
79. Giant Petrel *Macronectes giganteus* (\*). Not uncommon in Tasmanian waters. One was seen by McGarvie in the vicinity of a dead whale at Cape Wickham about 1964 and a beachwashed bird was found on Porky Beach during the

- first week of August 1968 (pers. com. Templeton) and Templeton collected another (1970/2/94) on Porky Beach on 17 August 1970.
80. Cape Petrel *Daption capense* (\*). Templeton collected two freshly beachwashed specimens (1969/2/56 and 71) on Porky Beach on 8 and 12 July 1969 respectively.
81. Blue Petrel *Halobaena caerulea* (\*). Templeton collected a freshly beachwashed specimen (1969/2/112) on Porky Beach on 29 October 1969 and Miss J. Hatten found a desiccated carcass (1970/2/22) on Admiralty Beach on 11 July 1970.
- 82a. Medium-billed Prion *Pachyptila salvini* (\*). Templeton collected seven beachwashed specimens on Porky Beach in 1969 as follows; one (1969/2/36) on 29 June, four (1969/2/52) on 12 July and two (1969/2/74) on 27 July. On 28 July 1970 he collected four (1970/2/48, 49, 51 and 55) from the same area and on 25 July J. Peterson collected one (1970/2/50) one mile inland from City of Melbourne Bay.
83. Fairy Prion *Pachyptila turtur* (\*).B. As a result of regular patrols along Porky Beach, Templeton picked up 17 specimens between 29 June and 20 October 1969. All have been registered into the collections of the Queen Victoria Museum for that year. In 1970 from the same area, he collected one (1970/2/8) in March and five (1970/2/44) on 22 July. It breeds in considerable numbers on Albatross Island about 41 miles south south west of King Island (Macdonald and Green 1963).
84. Dove-prion *Pachyptila desolata* (\*). Campbell (1888) records a specimen collected by the F.N.C.V. in 1887. Between 27 June and 17 August 1969 Templeton picked up nine beachwashed specimens along Porky Beach. All have been registered into the collections of the Queen Victoria Museum for that year. In 1970, from the same area, he collected one (1970/2/23) on 4 July, one (1970/2/52) on 28 July, one (1970/2/77) on 4 August and one (1970/2/62) on 24 August.
- 84a. Thin-billed Prion *Pachyptila belcheri* (\*). A dead specimen was collected by McGarvie on his farm two miles from sea on 14 August 1959 and sent to the National Museum of Victoria. Templeton collected a desiccated beachwashed specimen (1969/2/4) at Porky Beach on 7 January 1969. From beach patrols in the same area between 22 June and 17 August 1969 he picked up another 12 specimens. All have been registered into the Queen Victoria Museum for that year. In 1970, in the same area, he collected two (1970/2/53 and 54) on 28 July and one (1970/2/64) on 24 August.
85. Diving Petrel *Pelecanoides urinatrix* \*B. Common in adjacent waters. There is a small breeding rookery of about 20 burrows on Councillor Island (A.M.McG.). When McGarvie visited the site on 8 July 1966 he found the adults present and apparently engaged in nest cleaning. It also breeds on Black Pyramid about 28 miles south-east of King Island (Green and Macdonald 1964). It is interesting to note that none were found by Templeton on his beach patrols during the winter months in 1969 and 1970.
86. Wandering Albatross *Diomedea exulans* (\*). Templeton collected a desiccated beachwashed specimen (1969/2/1) on Unlucky Bay Beach in December 1968. It was an aged bird with white plumage except for some dark markings on the flight feathers and wing coverts. On 12 July 1969 he found the remains of another on Porky Beach, the head of which (1969/2/58) was sent to the Queen Victoria Museum.
88. Black-browed Albatross *Diomedea melanophris* (\*). Templeton found a desiccated

- specimen on Porky Beach on 4 July 1969 and salvaged the head (1969/2/59).
89. Yellow-nosed Albatross *Diomedea chlororhyncha* (\*). Templeton collected the desiccated remains of a beachwashed specimen (1969/2/88) on Porky Beach on 17 August 1969.
90. Grey-headed Albatross *Diomedea chrysostoma* (\*). Templeton collected a beachwashed specimen (1969/2/60) on Porky Beach on 12 July 1969 and another (1969/2/81) on Unlucky Bay Beach on 28 July 1969. On 15 July 1970 he found a desiccated specimen on Porky Beach and salvaged the skull (1970/2/21).
91. White-capped Albatross *Diomedea cauta* (\*)B. Common in adjacent waters. Dozens of albatross, believed to be this species, could be seen seawards from Martha Lavinia beach on 13 December (R.H.G.). Several hundred pairs breed on Albatross Island, about 41 miles east south-east of King Island (Macdonald and Green 1964) and a small colony was found breeding on Reids Rocks about 10 miles south-east of King Island in 1902 (Campbell 1903). Templeton found a desiccated specimen and salvaged the head (1969/2/85) on Porky Beach on 28 August 1969.

Albatross banded on Albatross Island by Macdonald and Green (1964) have been recovered from Robe and Carpenters Rocks in South Australia, West Rosebud beach in Victoria, 70 miles south of Cape Woolamai, Maatsuyker Island off southern Tasmania, at sea 10 miles west of Albatross Island and at sea 10 miles west of Currie on 5 October 1969. This last bird had been banded on Albatross Island on 17 January 1960 (Macdonald and Green 1964).

- Sooty Albatross *Phoebastria* sp. (\*). Templeton found the scattered remains of an albatross on Porky Beach on 29 June 1969 but the only parts which warranted salvaging were the head, upper neck and one foot (1969/2/38). This material was not sufficient to determine whether the species was *P. fuscus* or *P. palpebrata*.
96. Black Cormorant *Phalacrocorax carbo* \*. A few are seen fairly regularly on lagoons and estuaries, usually as isolated individuals.
97. Little Black Cormorant *Phalacrocorax sulcirostris* \*. A few seen fairly regularly.
98. White-breasted Cormorant *Phalacrocorax fuscescens* \*B. Common all round the coast and on estuarine waters. A rookery exists on Councillor Island which when visited on 8 July 1966 was found to comprise 75 nests ready for eggs (A.M.McG).
100. Little Pied Cormorant *Phalacrocorax melanoleucus* \*B. Common on lagoons and other suitable waters throughout the island, occasionally occurring in small flocks. A rookery comprising about 45 nests and situated about four to five feet above the water in tea-tree (*Meleuca ericifolia*) growing in a small lagoon near Boulder Point has been known to McGarvie for some years. Fairly extensive fires occurred in the area in February 1968 and the rookery was deserted in the following breeding season. In 1969 some birds returned to breed at the old site.
104. Australian Gannet *Sula serrator* \*B. Common in adjacent waters. Its nearest breeding rookeries are on Black Pyramid, about 28 miles to the south-east of King Island (Green and Macdonald 1964) and Lawrence Rocks about 140 miles to the north-west (McKean 1966).

- A gannet banded by Green and Macdonald (1964) on Black Pyramid was recovered at Naracoopa 14 months later. Tasmanian recoveries of Black Pyramid gannets have been made at Lillico Beach, Turners Beach, Devonport, Sulphur Creek, Marrawah and Burnie; in Victoria from Dock Inlet, Lett's Beach, Queenscliffe, Rosebud and in Western Australia from 15 miles south of Mandurah.
112. Caspian Tern *Hydroprogne caspia* \*B. Occasionally pairs and individuals are seen round the coast. The F.N.C.V. collected one bird and its nest of three eggs at the mouth of the Sea Elephant River on 8 November 1887 (Campbell 1888).
115. Crested Tern *Sterna bergii* \*. Common all round the coast but there are no known local rookeries.
118. Fairy Tern *Sterna nereis* \*B. Occurs all round the coast. A few have been known to breed at Lavinia Point and Yellow Rock and in October 1961 about 20 pairs were found breeding at Sea Elephant (A.M.McG).
125. Silver Gull *Larus novaehollandiae* \*B. Plentiful all round the coast and considerable numbers come inland to feed on invertebrate animals and to scavenge. A rookery of about 400 pairs on an island in the middle of Currie Harbour is well known. This is recorded by Campbell (1888). Another rookery "on large rocks near Etrick River," recorded by Campbell (1888), has since been deserted. One bird, banded as a nesting on Sisters Island, north-west Tasmania, on 7 November 1959 was found dead at Currie on 26 November 1962 (R.H.G.).
126. Pacific Gull *Larus pacificus* \*B. Common all round the coast and a few pairs breed in the more isolated areas. Campbell (1888) records a "nursery" on the inner of the New Year Islands with most nests containing three eggs. A pair was found resting on the shore of Lake Flannigan in December (R.H.G.) and McGarvie found birds resting beside inland dams during rough weather.
129. Turnstone *Arenaria interpres* \*. Small flocks are occasionally seen on rocky tidal reefs. Templeton has seen it at Porky Beach, Currie and Wickham, his earliest record being 30 September in 1970 and his latest on 21 May 1970 when upwards of 50 were seen at Currie.
130. Pied Oyster-catcher *Haematopus ostralegus* \*B. Pairs and small parties are common on the coastal beaches where it is a regular breeder. McGarvie observed a pair resting on the edge of a dam about two miles inland during rough weather and occasionally saw it flying across the island.
131. Sooty Oyster-catcher *Haematopus unicolor* \*B. Common all round the coast and a regular breeder on the rocky shore in localities where it is undisturbed.
133. Spur-wing Plover *Lobibyx novaehollandiae* \*B. Plentiful in the agricultural areas throughout the island. Autumn flocks may exceed 200 individuals (A.M.McG.). McGarvie has found both eggs and young in July.
135. Banded Plover *Zonifer tricolor* \*B. A few occurring in pairs and small parties are found throughout the island. McGarvie has found it breeding on the exposed coastal hills near Pass River. It has increased in recent years.
137. Eastern Golden Plover *Pluvialis dominicus* \*. A few occur on the tidal reefs and flats at Sea Elephant (A.M.McG.) and Templeton has found it on Porky Beach and near Currie golf links.

138. Hooded Dotterel *Charadrius cucullatus* \*B. Common in pairs and small parties on most coastal beaches where it is a regular breeder. Templeton has found wintering flocks of up to 30 individuals.
140. Double-banded Dotterel *Charadrius bicinctus* \* . A common visitor from March to late August. Some are usually present on the Currie golf course during the winter months (A.M.McG). They congregate in August, prior to migration and in August 1959 McGarvie found a flock at Egg Lagoon which he estimated at almost 1000 birds. On 6 June 1969 Templeton observed a flock on the aerodrome comprising more than 300 individuals. From May to June, 1970 about 200 lived on a wet flat at Reekara. As late as 23 August up to 20 were still present and were in breeding plumage.
143. Red-capped Dotterel *Charadrius alexandrinus* \*B. Common on all coastal beaches where it breeds annually. Templeton found it with newly hatched young at the estuary of Porky Creek on 11 July 1969. It may also occur on inland dams and the edges of exposed or receding lagoons. Green found several on the shore of Lake Flannigan in December. In 1970 early breeding on Porky Beach was disrupted by rough weather during July. The birds moved inland to pasture paddocks where Templeton found them breeding in early August.
144. Black-fronted Dotterel *Charadrius melanops* \*B. A few occur at various places throughout the island. McGarvie found a nest with eggs in the middle of the road near Cape Wickham lighthouse. Both birds were later killed by cars. He has also found odd nests on shingle beaches on the north coast. Green found a pair at Lake Flannigan on 13 December with a nest containing three eggs, situated about ten yards above the water's edge on dry sunbaked ground. The nest depression was lined with a few broken twigs and small pieces of driftwood. Templeton found six, with other dotterel species, at the estuary of Porky Creek in July 1969.
149. Eastern Curlew *Numenius madagascariensis* \*. McGarvie saw one at Cape Wickham on 26 January 1964.
153. Bar-tailed Godwit *Limosa lapponica* \*. McGarvie saw two at Duck Bay on 31 October 1961. Templeton saw two on Porky Beach on 17 October 1969. They had disappeared a few days later.
157. Common Sandpiper *Tringa hypoleuca* \*. One was seen at the mouth of the Ettrick River on 3 April 1966 (A.M.McG.).
158. Greenshank *Tringa nebularia* \*. McGarvie found a pair at Sea Elephant River during the summer of 1964.
161. Curlew Sandpiper *Erolia ferruginea* \*. Templeton found seven with a flock of Double-banded Dotterels on a flat at Reekara on 23 August 1970 and ten in the same locality seven days later.
162. Red-necked Stint *Erolia ruficollis* \*. Plentiful during the summer at Sea Elephant and Yellow Rock Rivers (A.M.McG.) and at the estuary of Porky Creek (Templeton).
163. Sharp-tailed Sandpiper *Erolia acuminata* \*. A few are usually present at Sea Elephant and Yellow Rock River during the summer months (A.M.McG.).
168. Australian Snipe *Gallinago hardwickii* (\*). Common throughout the wet marshy areas during the summer months, flocks of up to 100 s netimes being flushed (A.M.McG.). Odd birds were seen regularly along the Pass River in February, usually feeding along the verges of the tall dense tea tree scrub.

179. Australian White Ibis *Threskiornis molucca* \*. McGarvie (1965) records a single bird at Grassy in May 1958. In July 1965 he found another at Egg Lagoon.
180. Straw-necked Ibis *Threskiornis spinicollis* \*. A few occur occasionally as short term visitors. McGarvie (1965) reports three at Egg Lagoon May 1958 and three in the same area in July 1964. A single bird was present on Tatham's Lagoon during Green's February visit and local residents informed us that it had been there for some weeks previously.
181. Royal Spoonbill *Platalea regia* \*. A pair were present on Tathams Lagoon for several months during 1966. They were noticed to fly northwards at dusk but were always on the lagoon at dawn (A.M.McG.).
182. Yellow-billed Spoonbill *Platalea flavipes* \*. A single bird was seen at Egg Lagoon on 17 August 1965. It was feeding on the flats which had become flooded after heavy rain and was in the company of Straw-necked Ibis. It had been observed by local residents a few miles northward during the previous two months (McGarvie 1965).
- 187a. Cattle Egret *Bubulcus ibis* (\*). The first record of its occurrence on King Island was of a single bird at Egg Lagoon on 17 April 1965 (McGarvie 1965). Other sightings were made later in the same year at Cape Wickham, Yellow Rock and Pegarah and a pair were present at Yambacoona for some weeks during November and early December 1968. (A.M.McG.) In May 1969 McGarvie found two at Pass River and another two at Loorana. P. A. Tatham (pers. com.) reported five living at Pass River in June 1969 and four at Yambacoona in July 1969. In 1970 Templeton found four at Loorana on 20 April. This group had increased to 13 on 26 April and 15 on 27 April. They remained in the area until mid May.
188. White-faced Heron *Notophox novaehollandiae* \*B. Common round the coast, lagoons and swamplands. It is a regular local breeder. Two flying young were found in the dense tea-tree scrub at Pass River on 24 September (R.H.G.).
192. Nankeen Night Heron *Nycticorax caledonicus* (\*B. The tall dense tea-tree growing along the Pass River supports a fine rookery. When visited on 13 December, breeding had finished and all young had flown. The area was searched and many recently used nests, scattered egg shells (which showed signs of having been successfully incubated) and concentrations of dropping, suggested recent abandonment. When the rookery was revisited at the end of the following September, breeding was found to be at a peak with about 100 nests occupied and concentrated mostly in an area of about 300 yards by 50 yards. They ranged in height from 15 to 40 feet and were usually placed in the upper branches of the tea trees. Some were robust and appeared to have been relined and reused for many years. Material used was almost solely small sticks placed with the larger end inwards and radiating from the centre of the nest, giving the impression of a heavily spoked and concave wheel. The nests contents ranged from fresh eggs to almost fully fledged birds and several young were found which had abandoned their nests. Of the dozen or so nests examined, three was the maximum complement with the nestlings of any one nest varying considerably in size. This is apparently due to a time lapse of several days between the laying of each egg with incubation commencing following the laying of the first egg. This would allow easier feeding of the young when food is scarce, since the maximum demand at any time will be reduced by this staggering of hatching. It also means that parents can at least ensure the older, bigger chicks survive when they cannot feed the entire brood. This has been noted to occur in the Swamp Harrier (Green 1965).

The stomachs of the nestlings were considerably distended and, as a food source was not obvious, the largest member of a clutch of three (unfeathered) was dissected and found to contain beetle remains, a cockroach and three complete house mice (1968/2/231).

Between sunset and dusk on the evening of 27 September, 26 Night Herons were seen to fly from the rookery as if moving out to feed. Dispersal was in all directions but principally inland, the birds flying at considerable height, singly or in small parties.

The rookery has been known to the local farmers for upwards of 30 years but an almost complete lack of summer and autumn sightings indicated that the birds move to the Australian mainland following breeding. It is very rarely seen in Tasmania.

During Green's visit in December 1968 only seven Night Herons were found. A juvenile was flushed several times from a small, tea-tree lined pond at Pass River and a party of six adults was flushed from a diurnal roost in tall tea-tree at Lake Flannigan on 13 December. No birds could be found during the February visit. On 26 May 1969 P.A. Tatham (pers. com.) sighted nine Night Herons flying over Pass River. At midday on 1 July 1969 he visited the rookery and counted about thirty birds which he managed to flush from the nesting area. Templeton (pers. com.) inspected the rookery on 21 August 1969 and found nest construction and renovation had commenced but no eggs were found. He visited it again on 10 September 1969 and found breeding had commenced. Some nests appeared to be still under construction but others contained eggs in various stages of incubation. No nestlings were found and he estimated about 250 Night Herons were present. He again inspected the rookery on 17 October 1969 when the nests were found to contain eggs and young in various stages of development. From these observations it appears that birds begin arriving at the rookery during May and egg laying commences about July. This may be extended over the following two months but by the end of December, the rookery is again deserted and most birds have left the island.

197. Brown Bittern *Botaurus poiciloptilus* \*. This bird is rarely seen today but odd individuals are sometimes heard calling from the swamps. In earlier years it was quite common (pers. com. B. C. Heddle).
198. Cape Barren Goose *Cereopsis novaehollandiae*. The first known occurrence was on 28 July 1969 when four were found feeding on pasture in the Reekara district. It is believed they were part of a small consignment which had been taken from the Furneaux Islands and liberated on Hunter Island, north-west Tasmania, the previous year.
203. Black Swan *Cygnus atratus* \*B. Common on most lagoons and estuaries and a regular local breeder. Many were found with half-grown young in December and most of those on Tatham's Lagoon were still present in February, despite the low water level and the apparent ability of most of the young to fly. Small to half-grown cygnets were present on Tatham's Lagoon in September.
207. Mountain Duck *Tadorna tadornoides* \*. Rarely encountered on the island. McGarvie recalls seeing this species on only two occasions, three flying over Egg Lagoon in 1960 and three at Tatham's Lagoon in 1962.
208. Black Duck *Anas superciliosa* \*B. Common on lagoons and estuaries throughout the island and a regular local breeder. A few were present on most lagoons in December and the following September pairs, often with young, were a common sight on lagoons and farm dams. On 29 September one was found swimming with three domesticated Mallards at the Pegarah forestry reserve.

210. Chestnut Teal *Anas castanea* \*B. Common on lagoon and farm dams throughout the island and a regular local breeder. Many such sites supported pairs with clutches of young in September.
211. Grey Teal *Anas gibberifrons* \*. A few are seen occasionally on the lagoons but the island does not appear to be greatly favoured. There are no local breeding records.
212. Blue-winged Shoveler *Anas rhynchotis* \*B. A few are seen fairly regularly on the lagoons and farm dams. Four were on Bowling's Lagoon in December. It breeds annually in the long grass on the flats at Egg Lagoon (A.M.McG.).
215. Hardhead *Aythya australis* \*B. A few occur at irregular intervals (A.M.McG.).
216. Blue-billed Duck *Oxyura australis* \*B. Occasionally occurs in pairs on the lagoons. In December two were present on Pearshape Lagoon and at least one on Bowling's Lagoon. McGarvie found a pair with four young on Pearshape Lagoon in October 1961.
217. Musk Duck *Biziura lobata* \*. A few are usually present on most larger lagoons. In December they were present on Bowling's Lagoon, Pearshape Lagoon, Lake Flannigan, Penny Lagoon and Tatham's Lagoon. There are no local breeding records but a male, accompanied by two females, was engaging in courtship display in a lagoon near Boulder Point on 26 December (R.H.G.).
219. Swamp Harrier *Circus approximans* \*B. Common during the summer months with some birds remaining over winter. It was regularly seen during Green's visits in December, February and September. It is a constant predator upon young pheasants, a habit which incites some local residents to destroy it at every opportunity.
220. White Goshawk *Accipiter novaehollandiae*. There are no reports of this bird occurring on the island in recent years. Campbell (1888) includes it in a list of King Island birds following the visit of the F.N.C.V. in 1887. Heddle recalls having shot two which were killing young turkeys at Loorana about 1912.
224. Wedge-tailed Eagle *Aquila audax* \*. A rare visitor to the island. McGarvie saw one in May 1959, P. A. Tatham saw one near Pass River in 1966, Templeton saw one at Reekara on 23 March 1969, one at Currie on 14 April and 23 May 1970, and one at Loorana on 18 May 1970. Campbell (1888) also includes it in his bird list.
226. White-breasted Sea Eagle *Haliaeetus leucogaster* \*B. Frequently seen round the coast and all over the island. In December a pair were seen to rise from a small lagoon at Yellow Rock and a pair were roused from the edge of an access road in the forestry reserve at Pegarah. A nesting site is known at Boulder Point (A.M.McG.) and a nest, situated high up in a large eucalypt growing in a steep gorge in the Pegarah forestry reserve, was found occupied in 1967 and 1968 seasons (R.H.G.).
228. Whistling Eagle *Haliastur sphenurus* \*. McGarvie (1965) observed one at Egg Lagoon in May 1965. It was often seen to feed on wallaby carcasses and remained in the vicinity for several weeks. Templeton saw one at Yambacona on 15 September 1967, one on the east coast flying northwards on 23 July 1969 and one flying northwards over Loorana on 18 September 1970.



237. Peregrine Falcon *Falco peregrinus* \*. A rare visitor. McGarvie saw one at Egg Lagoon on 2 September 1963 and noticed that it had terrified ducks in the vicinity.
239. Brown Hawk *Falco berigora* \*B. Common throughout the island and a regular local breeder. A nest containing two well fledged young was found situated about 20 feet up in the thick canopy of a clump of tea trees near Lake Flannigan on 12 December. A pair, presumably the parent birds, was regularly seen resting on a nearby stack of baled hay.
- In January 1966 McGarvie counted 27 on the ground near Cape Wickham, apparently feeding on field crickets. Similar behaviour was observed by Green (1969) on Flinders Island in March 1966.
240. Nankeen Kestrel *Falco cenchroides* \*. A few are present all the year round (A.M.McG.). Three were seen feeding on the ground in an open paddock near Pagarah on 13 December and two in the same area on 26 September (R.H.G.).
245. Spotted Owl *Ninox novaehollandiae* \*B. A few occur all over the island. The gradual reduction of the tall decaying eucalypt stumps is continually reducing the available natural nesting sites and probably is responsible for a decrease in the owl population. Two instances are known where this species has resorted to artificial sites. In 1966 P. A. Tatham found a nest containing two fertile eggs tended by a sitting bird in a space between baled hay and the barn wall. Unfortunately the eggs were broken by dogs but the bird continued to occupy a diurnal roost beneath the roof of the barn for some months afterwards. In 1967 Mr. Lindsay Poke of Egg Lagoon found a spotted owl nesting in a wooden box (about 24 x 18 x 10 inches) which had, some time previously, been placed beneath a tank stand at a height of about twelve feet for the use of a pet possum. Two eggs were laid but only one hatched. When examined on 15 December it was found to be about three-quarters grown. The remains of house sparrows were scattered beneath the nest.
249. Barn Owl *Tyto alba* \*. One flew over Egg Lagoon at dusk one evening in January 1959 (A.M.McG.). Templeton also saw one at Loorana in 1968.
254. Rainbow Lorikeet *Trichoglossus moluccanus* \*. One bird was seen by McGarvie at Egg Lagoon on 23 June 1966 and subsequently was seen and heard flying overhead several times each day for the following week (Thomas 1968).
258. Musk-lorikeet *Glossopsitta concinna* \*. About 1950 McGarvie saw ten flying in a south-easterly direction over Egg Lagoon. On 21 April 1966 the same observer saw three flying northwards over north King Island (Thomas 1968).
264. Red-tailed Black Cockatoo *Calyptorhynchus banksia*. This species, or possibly the Glossy Black Cockatoo, once occurred on the island but disappeared about 1920 following extensive fires (pers. com. B. C. Heddle). It has not been recorded since.
267. Yellow-tailed Black Cockatoo *Calyptorhynchus funereus* \*B. Common at times but particularly during the autumn months (A.M.McG.). McGarvie has seen a flock of 106 at Egg Lagoon. Near the forestry reserve at Pagarah in December, one was watched to fly to a hole about 100 feet up in the exposed face of a tall decaying eucalypt stump. It clung there for some time and appeared to be feeding young. The perimeter of the entrance was heavily scarred.
268. Gang-gang Cockatoo *Callocephalon fimbriatum*. Once plentiful when the big eucalypt forests existed (pers. com. B. C. Heddle) but now very rarely seen.

A skin was obtained by Péron in 1802 (Stresemann 1951) and another on the visit of the F.N.C.V. in 1887 (Campbell 1888).

269. White Cockatoo *Kakatoe galerita* \*. Once present when the eucalypt forests existed but died out or left the island about 1920 following extensive bush fires (pers. com. B. C. Heddle). Up to five were living in the Reekara district during most of 1968 but, by their willingness to feed in a farmyard with domestic fowls, they appeared to be escaped aviary birds.
273. Galah *Kakatoe roseicapilla* \*. A rare visitor. Odd birds or small flocks occur at irregular intervals. In March 1967 a flock of about 30 was seen near Surprise Bay.
285. Green Rosella *Platycercus caledonicus* (\*)B. Common in a few scattered localities. The species was once much more plentiful than it is today. (pers. com. B. C. Heddle) The reduction of the eucalypt forests has greatly restricted its favoured habitat and the scarcity of suitable nesting sites must also be inhibiting breeding. The species is common in the forestry reserve at Pegarah where in February a number of young birds were seen soliciting food.
305. Orange-breasted Parrot *Neophema chrysogaster* \*. Small parties appear on the island about March, usually disappearing about July. In 1959 a flock of up to 75 was present in the paddocks at Egg Lagoon and in October 1961 six were seen at Sea Elephant. In most years flocks number about 20 to 30 (A.M.McG.). McGarvie also observed that they were usually on the wing before daylight and did not settle until after dark. They often feed among the dandelions and rushes. (see also Jarman 1965)
306. Blue-winged Parrot *Neophema chrysostoma* \*. A few are usually present in widely scattered areas during the spring and summer and some occasionally remain over winter (A.M.McG.). The F.N.C.V. found it in 1887 (Campbell 1888). McGarvie observed northward migration on 13 April 1966 (Thomas 1968).
309. Swift Parrot *Lathamus discolor* \*. Flocks of 20 to 30 are seen and heard flying southwards in September and returning northwards in March. It has not been found to settle on the island.
326. Sacred Kingfisher *Halcyon sanctus* \*. Odd pairs and individuals are occasionally seen, particularly in southern parts of the island. The F.N.C.V. collected a specimen in 1887 (Campbell 1888).
334. Spine-tailed Swift *Hirundapus caudacutus* \*. Passing migrants are seen every year from January to April (A.M.McG.). Numbers were seen frequently passing northwards over the Pegarah area in February. McGarvie has seen it attracted to feed on flying insects which were disturbed by a tractor working among the rushes at Egg Lagoon.
335. Fork-tailed Swift *Apus pacificus* \*. Between 11.30 a.m. and 1 p.m. on 7 February 1967 a flock of at least 500 were seen to pass from east to west over Egg Lagoon. No spine-tailed swifts could be seen among them (A.M.McG.). About 30 to 40 were seen in 1961 (A.M.McG.).
337. Pallid Cuckoo *Cuculus pallidus* \*B. A few are present during the spring and summer and flying young were seen in February. McGarvie found birds on 25 September 1966 (Thomas 1968) and Green found it on the same date in 1968. Templeton found two near Pass River on 30 August 1968.

338. Fantail Cuckoo *Cacomantis pyrrhophanus* (\*) B. A few occur in the spring and summer and odd birds remain over winter (A.M.McG.). It was regularly seen at the forestry reserve in February but none were found during Green's September visit.
342. Horsfield Bronze-cuckoo *Chalcites basalis* \*B. A few occur in the spring and summer and a number were seen and heard from 26 September.
344. Golden Bronze-cuckoo *Chalcites plagosus* \*B. A few occur in the spring and summer and it was heard and seen in several localities from 26 September.
357. Welcome Swallow *Hirundo neoxena* (\*)B. Plentiful in the spring and summer. Most migrate in the autumn though a few always remain over winter (A.M.McG.). Templeton found about 30 remained near Porky Creek over the winter of 1969. It was still plentiful at the end of February and was often seen in small flocks. Many old nests were found beneath bridges, verandahs, eaves, in sheds and disused houses. Nests with eggs and newly hatched young were found at Pass River on 23 September.
359. Australian Tree-martin *Hylochelidon nigricans* \*. A few are present in the spring and summer but all migrate in the autumn (A.M.McG.). There are no local breeding records.
361. Grey Fantail *Rhipidura fuliginosa* (\*)B. Common throughout the year but especially in the spring and summer. It was commonly observed by Green on all visits.
364. Willie Wagtail *Rhipidura leucophrys* \*. A rare visitor, odd birds occurring for short periods and at irregular intervals. A pair lived at Egg Lagoon from March to May 1968 (A.M.McG.).
366. Satin Flycatcher *Myiagra cyanoleuca* (\*). Common in a few areas during the summer. It was regularly seen in the Pegasus forestry reserve in February, usually high up in the eucalypts or on the perimeter of the pine plantation. Early one morning a single bird was attracted by a fly on the inside of a window of the camp and was observed to make several attempts to take it through the glass despite the close presence of the observer.
382. Flame Robin *Petroica phoenicea* (\*)B. Common throughout the island and regularly seen by Green on all visits, particularly in the Pegasus forestry reserve.
383. Pink Robin *Petroica rodinogaster* \*. Rare, a few occurring in the dense gullies. McGarvie has seen odd birds at the Nook and in his garden at Egg Lagoon during the winter months.
386. Dusky Robin *Amaurodryas vittata* (\*)B. Plentiful and widespread over the island and occurring in a wide range of habitat. Nests with eggs and half grown young were found in September.
398. Golden Whistler *Pachycephala pectoralis* (\*)B. A few throughout the island but mostly confined to the eucalypts and tall tea trees.
401. Rufous Whistler *Pachycephala rufiventris* \*. McGarvie observed a male in mature plumage in his garden at Egg Lagoon on 28 October 1968 and in the following two weeks made three sightings of females in the scrub country between Egg Lagoon and the east coast. Templeton found a male at Reekara on 7 September 1969.
405. Olive Whistler *Pachycephala olivacea* (\*)B. Common and widespread particularly in the eucalypt and tea tree scrub.

408. Grey Shrike-thrush *Colluricincla harmonica* (\*)B. Common and widespread particularly in the eucalypt and tea tree scrub. At the Pegarah forestry reserve a subadult regularly visited the windows of our camp to attack its reflection.
415. Magpie Lark *Grallina cyanoleuca* \*. One was seen at Pass River on 29 April 1965 and in the same locality on several occasions during the following winter (A. M. McG.). Mr. Len Sullivan had six living on his property at Pearshape during 1970 and suggests that some may have bred in the area about 1960.
424. Black-faced Cuckoo-shrike *Coracina novaehollandiae* (\*). A few are regularly seen each summer but there are no records of it having bred on the island. Several were seen at the forestry reserve in February. On the morning of 1 May 1965 McGarvie saw a flock of 25 flying seaward (north) from Cape Wickham and on 21 April 1966 he observed fifteen passing northwards over Egg Lagoon.
430. White-winged Triller *Lalage sueuruii* (\*). Templeton found an adult female at Loorana on 11 October 1968 and McGarvie found an adult male near Boulder Point on 30 November 1968. Templeton saw individuals at Loorana on 25 February and 19 March 1969.
447. Australian Ground-thrush *Oreocincla lunulata* (\*)B. Common in the tea tree scrubs and dense gullies all over the island. Because of its habit of scratching among the litter for its food, it sometimes becomes a nuisance in the country gardens which it invades from nearby stands of dense tea tree. Young birds newly out of the nest were seen at Egg Lagoon on 25 September.
448. White-fronted Chat *Epthianura albifrons* \*B. Common in the open grassland and round the swamps and lagoon edges.
473. Tasmanian Thornbill *Acanthiza ewingii* (\*)B. Plentiful all over the island and occurring in all habitat types. It is one of the most commonly encountered birds. Many thornbills were handled at Pass River and Pegarah forestry reserve in February and all except one (see 475) proved to be of this species. Its prolific numbers and general distribution are consistent with that found on Flinders Island (Green 1969). In Tasmania its distribution is restricted to the rainforests, and its place being taken in the drier habitat by *A. pusilla*. Campbell (1888) does not include it in the list of species encountered by the F.N.C.V. in 1887. This is most surprising in view of their extensive collecting and its present population. Campbell (1903) and Campbell (1903a) give the first references to this species on King Island when they mention a single specimen, collected in November 1902 which they believed to be "a re-discovery of Gould's long-lost *Acanthiza ewingii*."

Mack (1936) found it common "on a recent visit." Mayr and Serventy (1938) refer to a series of King Island birds which they state "fall within the same range variation, (as the Tasmanian race) although the averages are smaller." Measurements taken by Green on a recently collected series are presented in the accompanying table and agree with the conclusions of Mayr and Serventy (1938) except for the culman which is slightly larger in the King Island race. The males of both races are somewhat larger than the females from the same area.

The species appears to have been rare on King Island at the beginning of the twentieth century and to have increased greatly in the last 60 years.

		TAIL	WING	TARSUS	CULMAN
King	9 female	43-49(46.4)	49-54(51.0)	20.5-21.8(20.9)	11.6-13.3(12.3)
Island	10 male	46-52(47.5)	50-53(51.8)	20.5-22.5(21.2)	12.5-13.2(12.9)
Northern	7 female	47-51(49.0)	50-52(50.4)	20.4-21.6(21.2)	11.0-11.9(11.6)
Tasmania	10 male	50-54(51.6)	51-56(53.4)	21.0-22.6(21.8)	11.8-12.9(12.3)

475. Brown Thornbill *Acanthiza pusilla* (\*)B. A subadult male, with the skull only slightly ossified (1968/2/163) was collected by Green in the Pegarah forestry reserve on 28 February. This is apparently the first specimen collected on King Island since A. G. Campbell secured four on 10 November 1902 which A. J. Campbell (1903a) described as a new species *A. magnirostris*, the Large-billed Tit, and later (Mathews 1910) renamed *A. archibaldi*. Mack (1936) includes it as a subspecies of *A. pusilla*. Mayr and Serventy (1938) doubt its validity as a subspecies. Campbell (1888) indicates that skins, and eggs of *A. diemenensis* (= *A. pusilla*) were collected during the F.N.C.V. expedition to the island in 1887 but the authors have been unable to examine these specimens or to verify that they were in fact of this species and not *A. ewingii*.

Green has seen two of A. G. Campbell's specimens, now held in the H. L. White collection, National Museum of Victoria (reg. nos 2087 and 2088) and found that they agree with the recently collected bird, the measurements of which are as follows: weight 7.7 gm., total length 117, tail 40, wing 52, wing spread 161, tarsus 20, middle toe 12.3, culmen (measured to skull on dried specimen) 16.2. Mack (1936) gives measurements of three specimens and states "During a recent visit to King Island no specimen of this form was seen although I made an intensive search. On the other hand *Acanthiza ewingii* was fairly numerous." In February and September, Green personally handled several dozens *Acanthiza*, from the locality in which the single *A. pusilla* was taken, as well as numerous birds from Pass River and other areas but no further specimens of *A. pusilla* could be found. The specimen collected at Pegarah was netted in dense mixed dry scrub and in association with a high population of *A. ewingii*. It was immediately recognised by its conspicuously greater bill length (16.2 compared with 11.6 to 13.3 (mean 12.6) for *A. ewingii* from the same area.) Mayr and Serventy (1938) give culmen lengths (measured from skull) for five Tasmanian *A. pusilla* as ranging from 14 to 14.5 (mean 14.1). A series (of 16, equal sexes) from northern Tasmania, held in Green's personal collection and measured by him in the same manner as the 1968 King Island bird, range from 12.4 to 14.1 (mean 13.3). The rarity of *A. pusilla* on King Island compared to the present high population of *A. ewingii* suggests that the latter may be supplanting the former but the reasons for this are obscure. It is surprising to find *A. ewingii*, the rainforest species of Tasmania, so strongly established in the dry sclerophyll and heathland and apparent failure of *A. pusilla* to populate and compete successfully in this habitat which is normally its stronghold. Whatever the reasons, they may have been likewise responsible for the present situation on Flinders Island where only *A. ewingii* occurs today.

487. Scrub-tit *Acanthornis magnus* (\*)B. A few occur in the damp fern gullies but its secretive habits make it difficult to detect. Its presence on the island was not suspected until 1966 when Courtney and McGarvie found it at Pass River, previous to which it had not been recorded beyond

- the Tasmanian mainland. Several were seen by Green at Pass River and McGarvie has seen it at Pegasus forestry reserve, The Nook and Yellow Rock.
495. Brown Scrub-wren *Sericornis humilis* (\*)B. Plentiful throughout the island and occurring in a wide range of habitat. It is one of the most commonly encountered species. The average body weight (18.2), total length (134.4), wing span (185.8) is similar to that of the Tasmanian race (Green 1969).
522. Little Grassbird *Megalurus gramineus* \*B. Several were heard calling from rushes growing in a swampy area near Grassy in July 1966 (A.M.McG.). Campbell (1903) also listed it as "whistling among the reed-beds bordering lagoons." Templeton has often seen it amongst the tall grass on swampy ground beside Porky Creek where he found a nest with three well developed young on 27 October 1970.
525. Golden-headed Fantail warbler *Cisticola exilis* (\*)B. Common in the tall grass and rushes. With the drainage and conversion to improved pastures of much of its natural habitat it has readily adapted to living among the introduced "tall fescue" which today grows prolifically in many of the low lying wetter areas. This grass grows to a height of several feet in the spring and provides excellent shelter and nesting sites. Many nests and young birds are destroyed annually by tractor driven slashers which are used to remove the rank growth. The F.N.C.V. collected it at Egg Lagoon in 1897. This area has since been drained for pastoral development but *C. exilis* is still common here, along the water courses and such places where the vegetation is tall and rank.
529. Superb Blue Wren *Malurus cyaneus* (\*)B. Plentiful all over the island. A. G. Campbell (1903) found it to be "one of the commonest birds on the island". He gives details of its characteristics and includes a coloured plate to illustrate the darker plumage which gave rise to it being described by A. J. Campbell (1901) as a distinct species *M. elizabethi*, the Dark Blue Wren. Mathews (1923) considered it merely a subspecies.
543. White-breasted Wood-swallow *Artamus leucorhynchus* \*. McGarvie (1965) found four at Egg Lagoon on 15 June 1961. They remained for three days. One was collected and lodged in the National Museum of Victoria.
544. Masked Wood-swallow *Artamus personatus* \*. McGarvie (1965) found two at Egg Lagoon on 26 November 1963. They were in company with eight White-browed Wood-swallows. Nine were seen on 2 February 1964, three of which were in juvenile plumage. They were last seen on 9 February 1964. On 15 July 1970 Lance McGarvie found an adult (1970/2/56) apparently exhausted and near to death at Egg Lagoon. Very rough weather was prevailing at the time. There are no records from Tasmania.
545. White-browed Wood-swallow *Artamus superciliosus* \*. McGarvie (1965) has found it to be a fairly regular visitor, usually arriving in the north of the island about November each year and departing about March but has records of odd birds for every month of the year. There are no local breeding records. Sharland (1958) records that many appeared on King Island on 9 April 1905. There are no records of this species from Tasmania.
547. Dusky Wood-swallow *Artamus cyanopterus* \*. A few during the summer months (A.M.McG.). This species was collected by the F.N.C.V. in November 1887 (Campbell 1888) and a few pairs were seen in the eucalypts by Campbell in November 1902. None could be found by Green in December or February, months when the species is normally plentiful and conspicuous in Tasmania. Templeton observed 19 at Yambacoona in July 1970. Its occurrence on Flinders Island as a transitory species only (Green 1969) and the lack of breeding records on King Island suggests that its presence here is

primarily as a transitory migrant.

565. Spotted Pardalote *Pardalotus punctatus* \*B. A few occasionally seen (A.M.McG.). Green was unable to locate it. Ian Abbott (pers. com.) found a breeding pair in October 1970.
567. Striated Pardalote *Pardalotus striatus* \*. A few occasionally seen (A.M.McG.). Green was unable to locate this species. It was collected by the F.N.C.V. in 1887 (Campbell 1888) and Campbell (1903) found it common where gum trees existed. Its numbers have apparently been reduced with the habitat alteration.
571. Forty-spotted Pardalote *Pardalotus quadragintus*. Campbell (1888) records that it was collected by the F.N.C.V. a few miles north of Currie in 1887. There are no other records.
574. Grey-breasted Silvereve *Zosterops lateralis* (\*)B. Plentiful throughout the island during the autumn months especially. In December it was regularly found in all habitat types and often seen to feed among the eucalypt foliage in the same manner as the thornbills. McGarvie saw an all yellow bird in 1963 and again in 1967. Templeton saw two lemon coloured individuals at Loorana in May and June 1969.
582. Strong-billed Honeyeater *Melithreptus validirostris* (\*)B. Common where eucalypts occur and occasionally seen in the tall tea trees. It was found with flying young among the tall dense tea tree along the Pass River on 13 December. In February parties of about a dozen, including birds in adult and subadult plumage, were regularly seen in the Pegarah forestry reserve. Its favoured feeding places are the trunks and boughs of the eucalypts and on the tea trees where the loose paper bark provides a cover for a good source of insect food. It was usually found in parties and showed little concern at our presence. When feeding on the trunks of the tea trees it would often descend to ground level and search among the litter as close as ten feet from the observer. This behaviour has not been recorded from the Tasmanian population.
584. Black-headed Honeyeater *Melithreptus affinis* (\*)B. Now rare on the island. Campbell (1888) records it being collected in the Fraser River area. Campbell (1903) refers to it as being plentiful along the Pass River but in three visits Green has been able to find only one bird in this area. This was on 22 December when it was found feeding in the foliage of one of the few remaining eucalypts growing among the tall tea tree. Campbell (1903), referring to Pass River, states that "From a bird's point of view, it is like an oasis in a desert of pasture." The introduced pastures now extend almost to the banks of the stream and in most places the width of the native bush is little wider than a "stones throw."
- McGarvie saw a pair at Egg Lagoon on 11 May 1966 and a few on odd subsequent occasions. Small parties were found feeding in the upper foliage of eucalypts in the Pegarah forestry reserve during the first week in October.
591. Eastern Spinebill *Acanthorhynchus tenuirostris*. Now either very rare, or no longer exists, on the island. The F.N.C.V. collected it in 1887 at Porky Lagoon and near the Fraser River. (Campbell 1888) and Campbell (1903) record it as occurring about the homestead gardens and in the native bush. The present authors have never seen it on the island. Heddle told us of a bird, the description of which fitted this species, which is occasionally seen feeding on fuschias in his garden at Currie. Salomonsen (1966) has described the King Island population as a subspecies, *A.t.regius* from a subadult male (reg. no. 693497) in the collection of the American

## Museum of Natural History.

593. Tawny-crowned Honeyeater *Gliciphila melanops* \*. A few occur in the heathy areas near Lake Martha Lavinia (A.M. McG.).
614. Yellow-faced Honeyeater *Meliphaga chrysops* \*. McGarvie has observed this bird in the heath and stunted eucalypts near Boulder Point for some years, and several dozen were present in September. It appears to be increasing.
616. Yellow-throated Honeyeater *Meliphaga flavicollis* (\*)B. Common throughout the island and a regular local breeder. A nest with three halfgrown young was found, at the Pegarah forestry reserve in December, situated about nine feet up in thick scrub.
630. Crescent Honeyeater *Phylidonyris pyrrhoptera* (\*)B. Common throughout the island, especially so in the mixed scrubs within the boundary of the Pegarah forestry reserve. It was often found feeding in the flowering honeysuckles *Banksia marginata* and young birds which had just left the nest were found at Pegarah on 27 February.
631. Yellow-winged Honeyeater *Phylidonyris novaehollandiae* (\*)B. Plentiful throughout the island and the most common honeyeater. Subadults which had apparently left the nest no more than two weeks previously were found at Pegarah forestry reserve on 28th February. A nest with eggs was found at Pass River on 25 September. Salomonsen (1966) places this honeyeater in the genus *Phylidonyris* and at the same time describes the Bass Strait population as subspecifically distinct under the name *P. n. caudata*. A sample collected by Green in February was found (as stated by Salomonsen 1966) to be larger than Tasmanian birds. This is illustrated in the accompanying table. The measurements are from adults only.

	TASMANIA		KING ISLAND	
	18 Males	6 Females	11 Males	2 Females
Weight (gm)	22.0	20.1	22.7	19.2
Total length	185	174	198	181
Tail	80	75	88	78
Wing	79	75	82	75
Wing Span	237	222	243	221
Tarsus	22.9	22.4	23.8	22.4
Toe	14.8	14.5	15.0	13.7
Bill	23.7	22.2	27.1	24.3

Comparative proportions of *P. novaehollandiae* from Tasmania and King Island.

639. Yellow Wattlebird *Anthochaera paradoxa* (\*)B. A few throughout the island but principally in the areas of eucalypts. A small party was seen at Pass River in February where they regularly visit the farm gardens to feed among the introduced flowering shrubs.
647. Australian Pipit *Anthus australis* (\*)B. A few, principally in the areas of unimproved grassland and natural clearings. Campbell (1903) found it common but this is scarcely the case today. The introduced skylark is



now plentiful on the introduced pastures and the expansion of this man-made habitat at the expense of the native grassland may have been responsible for a decrease in the status of the pipit. Several pairs were found along the access roads of the Pegarah forestry reserve on 29 September and at least one was carrying nesting material.

690. Little Raven *Corvus mellori* (\*). Occurs all over the island but fluctuates numerically. Hedde states "when commercial game snaring was being carried on about 40 years ago the raven was quite plentiful and used to follow the snare lines to feed on the discarded wallaby carcasses. With the decrease in the price of furs and subsequent lack of snaring the raven became less common." It now appears to be increasing again, probably due to the increase in agriculture which is providing it with an enhanced food supply in the form of pasture parasites and farm refuse. Only one bird was found by Green in the three visits and it seems apparent that the species is nomadic and its occurrence is probably influenced by food supply. Locally abundant populations occur round lambing paddocks in the winter months and are sometimes trapped by farmers. A sample was thus collected by Mr. A. McSweyn in June 1970 enabling positive determination (Rowley 1970).
696. Black Currawong *Strepera fuliginosa* (\*)B. Common in parts. Several dozen were seen at Boulder point in December and a few pairs and individuals were present at Pass River and Pegarah in February. McGarvie has seen flocks of from 30 to 40 apparently feeding on maggots in the decaying kelp at Surprise Bay. Campbell (1888) records similar behaviour on the coast at Whistler Point and found it one of the most plentiful birds. During the winter months flocks of up to 150 have been seen feeding on pasture parasites.
707. White-backed Magpie *Gymnorhina hypoleuca* \*B. Introduced from Victoria about 1901 it has since spread over the island and today is one of the most common and conspicuous birds. In the agricultural areas it is usual to see dozens within an area of perhaps 100 acres. The present lack of eucalypts does not appear to have impeded its well-being as it makes good use of tall tea trees and introduced pine plantations as shelter and nesting sites. Breeding was well advanced in September, both flying young and nests with eggs being found.

#### INTRODUCED FOREIGN SPECIES

991. Blackbird *Turdus merula* (\*)B. Common all over the island especially along the dense tea tree creeks and in the tea tree shelter belts where it finds good cover and nesting sites.
993. Skylark *Alauda arvensis* \*B. Plentiful in all the pastoral areas and greatly increased in numbers in recent years.
995. House sparrow *Passer domesticus* \*B. Common all over the island, but principally in the vicinity of farms and towns.
996. Goldfinch *Carduelis carduelis* \*B. Plentiful all over the island.
997. Greenfinch *Chloris chloris* \*B. Common and regularly seen and heard in the vicinity of the tall tea tree scrubs where it finds good shelter and nesting sites.
999. Common Starling *Sturnus vulgaris* \*B. Very common all over the island, especially in the agricultural areas.
- Pheasant *Phasianus colchicus* var. \*B. Common all over the island and often

seen in the pastoral areas in the vicinity of hedges and dense tea tree shelter. It was first introduced about 1912 when eggs were brought in and hatched under a bantam and the young birds liberated (pers. com. B. C. Heddle). A note on the introduction of the pheasant and other birds to King Island appeared on Page 11 of the King Island News of 6 May 1970 under the heading "How the Pheasant came to King Island."

Californian Quail *Lophortyx californicus* (\*)B. Common all over the island but preferring to remain in or near to the shelter of the dense tea tree or scrubland where it can find good shelter and breeding sites. It was first introduced to the island from New Zealand about 1920 and was originally liberated and became established near Currie (pers. com. B. C. Heddle).

Peafowl *Parvo cristatus* \*B. A small feral population has been living in the Pass River - Reekara area for many years. The number is kept low because they are occasionally shot for the dining table.

#### OTHER LAND VERTEBRATES

##### MAMMALS

Campbell (1888) gives a list of the mammals encountered during the Field Naturalist Clubs of Victoria expedition in 1887. One species has since died out.

Spiny Ant-eater *Tachyglossus setosus*. A few occur throughout the island. One (1968/1/12) was collected near Pegarah. Campbell (1888) described it as being plentiful and collected several.

Platypus *Ornithorhynchus anatinus*. Campbell (1888) records seeing only one. A few are known to occur in the rivers, creeks and lagoons, mostly on the eastern side of the island.

Red-necked Wallaby *Wallabia rufogrisea*. Plentiful throughout the scrubland from which it invades the pastoral areas at night to graze. It was commonly seen grazing along the edges of the access roads in the Pegarah forestry reserve and a specimen (1968/1/15) was collected. One skull (1967/1/62) was obtained from Pass River on 14 December and three more (1967/1/60) from the same area on 15 December.

Pademelon *Thylogale billardieri*. Plentiful wherever the thick tea tree scrub occurs. It invades the pastoral areas at night as does the preceding species.

Potoroq *Potorous tridactylus*. A few still remain in the thick tea tree scrub but the clearing of these areas for pastoral development is reducing drastically its already limited habitats. It is smaller in size and much browner in pelage than the Tasmanian form, features which prompted Courtney (1963a) to describe it as subspecifically distinct under the name *P. t. benormi*. Minor corrections were given later by Courtney (1963b). The types were lodged in the Australian Museum (Courtney 1963b). The Queen Victoria Museum holds two spirit specimens (1964/1/9, 1968/1/37) and one skin with skull (1946/1/3). A female has been kept in captivity by Green for the past three years and has to date reared one young after mating with a male from Tasmania. This offspring was a female which, in the following year was found to be carrying a pouched young.

Wombat *Vombatus ursinus*. The log books of the "Lady Nelson" record the occurrence of wombats on King Island in January 1802 (Lee 1915, Alexander 1921).

Péron (1804) included a plate (no. 28) following his visit in December 1802.

The F.N.C.V. were unable to find wombats during their visit in 1887 and the animal appears to have died out sometime prior to the beginning of the twentieth century. Spencer and Kershaw (1910a and b) give some details of its discovery and relationship.

Brush-tail Possum *Trichosurus vulpecula*. Plentiful in the tea tree scrubs and eucalypt country. The scarcity of tree hollows, rock crevices and other diurnal retreats results in it using such sites as hay stacks and platforms of accumulated sticks and litter in the upper foliage of tea trees and introduced pine plantations. Green found one occupying an old night heron's nest at Pass River in February and Templeton has made similar observations.

Only the grey phase, similar to that of Flinders Island and the Tasmanian midlands and north east, occurs on King Island. It was considered to be rare previous to about 1945 but since then it has greatly increased in numbers. A similar population change has taken place in Tasmania (R.H.G. unpub. data).

Tasmanian Ring-tail *Pseudocheirus convolutor*. A few occur in the tea trees and eucalypts but nowhere are they plentiful. An adult male (1968/1/14) was found in a tree fern growing in the bottom of a deep gully in the Pegasus forestry reserve. The Queen Victoria Museum holds a spirit preserved female (1969/4/1) collected near Sea Elephant on 25 March 1963. The species was common about thirty years ago but suffered a decline which coincided with the increase in the numbers of brush-tail possums. A similar population change occurred in Tasmania about the same period (R.H.G. unpub. data).

Pigmy Possum *Cercartetus nanus*. Rare. McGarvie occasionally finds this animal at Egg Lagoon and in December 1967 found one drowned in a drum of water. The skull has been lodged with the Queen Victoria Museum (1968/1/33). An adult male (1968/1/36) was found near Camp Creek on 15 October 1967 and has been spirit preserved.

Tiger Cat *Dasyurops maculatus*. Though common in the days of early settlement no tiger cats have been seen on the island since 1923 and they are now generally believed to have died out. The settlers destroyed it at every opportunity because of its habits of killing domestic poultry and damaging the pelts of game animals by following snare lines and feeding on snared animals. This persecution, together with the severity of bush fires, no doubt assisted in its decline and eventual local annihilation. The last specimen was taken near Loorana by B. C. Heddle and its skin was sent to the National Museum of Victoria. This was not accompanied by the skull. The Queen Victoria Museum holds three skulls, 1940/163, 1943/105 and 1967/1/59, the latter specimen having been presented to the Queen Victoria Museum by Mr. G. R. Tatham. It had been collected by the donor's father about 50 years previously. Spencer and Kershaw (1910a) discuss the King Island tiger cat and also describe a larger subfossil species *D. bowlingi*.

Little Marsupial-mouse *Antechinus minimus*. Four were collected at the Pegasus forestry reserve in February, all as the result of their having been caught by a domestic cat. At dawn on the morning of 27 February a domestic cat was found with a subadult female (1968/1/13) which was still alive and active, though the fur was heavily soiled. The pouch was undeveloped and the nipples very small but the nipple complement was unmistakably six which is consistent with the Tasmanian subspecies *A. m. minimus* (Wakefield and Warneke 1963). On 28 February the decomposing carcass of

another subadult female was found on an access road near to the chief forester's residence and on 29 February two desiccated carcasses (1968/1/7) were found in a dry drain in the same locality. When shown the specimens the chief forester stated that it was not unusual for his cat to bring home little animals similar to them. The locality was on the edge of the pine plantation and through it ran a semi permanent creek which created small swampy areas choked with a rank growth of weeds. Animals answering the description of this species have also been reported from the north of the island and from near Naracoopa.

Grey-headed Fruit-bat *Pteropus poliocephalus*. Morrison (1941) records this species from the state school at Currie and suggests it may be the first record from King Island. About 1938 Mr. Alf Button informed us that he found a large bat with a wing span of about two feet. Its wings had become entangled in the strands of a barbed wire fence at Pegarah and had died just prior to his discovering it. The specimen was not saved.

Lesser-long-eared Bat *Nyctophilus geoffroyi*. The collections of the Queen Victoria Museum includes one adult female (1964/1/50) collected on King Island on 12 April 1964.

Eastern Swamp-rat *Rattus lutreolus*. Common in many areas. An adult female (1967/1/61) was trapped in dense tea tree at Pass River on 13 December. The nipple complement was found to be eight which is in conformity with the Tasmanian subspecies *R. l. velutinus*. On 24 February two females and a male (1961/1/16-18) were trapped in coarse long grass growing in a bog at Pass River. McGarvie has found it living in the tall fescue grass at Egg Lagoon and Mr. Don Bowling collected a specimen (1969/1/3) in a swamp in the extreme south of the island.

#### INTRODUCED FOREIGN MAMMALS

Ship Rat *Rattus rattus*. Occurs spasmodically all over the island. Two males and a female (1968/1/8-10) were trapped at the Pegarah forestry reserve on 29 February. They were taken from a wet drainage area on the edge of the pine plantation and near to human dwellings. All were "greys" with grey belly fur.

European House-mouse *Mus musculus*. Common throughout the island.

Feral Cat *Felis catus*. A few occur throughout the island.

#### AMPHIBIANS

An account of the amphibians of King Island is given by Littlejohn and Martin (1965). A small series of amphibians was collected and observations were made in the course of the present study. All and only those species recorded by Littlejohn and Martin (1965) were collected.

Striped Marsh-frog *Limnodynastes peroni*. Heard calling from the verges of Pearshape Lagoon and other small ponds in that vicinity on 15 December. On 23 February it was heard calling during the night at Pass River. With the use of a flash light, the site was located in a weed bog and three (1968/4/4) were collected. Freshly laid egg masses were numerous and were well secluded beneath the weedy growth on the surface of the bog. They all consisted of unpigmented eggs as was found by Littlejohn and Martin (1965) and which is consistent with that laid by the species in Tasmania. A few were heard calling at Pass River and Yambacona on 26

September. Templeton collected three (1970/4/3) from a drain on the Currie golf links in May 1970. Littlejohn and Martin (1965) found it only at Pearshape and Surprise Bay and considered it was restricted to the extreme southwest of the island.

Burrowing Marsh-frog *Limnodynastes dorsalis*. Heard calling from a small pond at Pegarah on 14 December and a pair in amplexus were collected (1967/4/11). A few were heard calling in September.

Brown Froglet *Crinia signifera*. Common and widespread. Specimens were collected at Pegarah on 14 December (1967/4/10) and at the forestry reserve on 29 February (1968/4/6). It was calling vigorously in all areas visited in September.

Smooth Froglet *Crinia laevis*. Five specimens (1968/4/2) were collected at Pegarah forestry reserve on 29 February.

Brown Tree-frog *Hyla ewingii*. One (1968/4/3) was collected at the Pegarah forestry reserve on 29 February.

Green and Golden Tree-frog *Hyla aurea*. Three (1968/4/5) were collected from an old disused sheep dip at Pass River on 22 February. In the same locality a small bulldozed waterhole, about fifteen yards across and carrying a growth of water weeds, was found to be inhabited by about 50 large specimens. At night and during the day they could be found resting on surface weed or the grassy verges.

## REPTILES

An account of the reptiles of King Island is given by Rawlinson (1967) who lists five lizard and three snake species for King Island. In the course of recent visits to the Island Green made observations on the reptile fauna and collected a small series. Templeton has since collected additional material and lodged it with the Queen Victoria Museum. This included one additional species.

Rock Lizard *Egernia whiti*. Rawlinson (1967) lists only three specimens. These were collected at Naracoopa but he was unable to find it during his visit. The Queen Victoria Museum has since received an adult male (1968/3/13) collected at Boulder Point on 3 November 1968.

Southern Blue-tongue Lizard *Tiliqua nigrolutea*. A very large female (1968/3/4) was collected at the Pegarah forestry reserve on 26 February. It weighed 800 grams and had a total length of 460 millimetres. Upon dissection it was found to be carrying eight embryos (five left, three right) of an average length of 112 millimetres. The stomach contained remains of moths, beetles and the wing feathers of a small bird.

Tussock Skink *Leiolopisma entrecasteauxi*. A single specimen (1967/3/43) was collected at Pass River on 12 December. Templeton has collected it at Whistler Point and Loorana.

Three-lined Skink *Leiolopisma trilineatum*. One (1968/3/7) was collected at the Pegarah forestry reserve on 27 February.

Metallic Skink *Leiolopisma metallicum*. One (1968/3/6) was collected at Pass River on 23 February. Three *L. metallicum* were collected by Green on Albatross Island on 19 January 1960.

Small-scaled Skink *Leiolopisma pretiosum*. Templeton collected the first

specimen from King Island (1969/3/5) among rotting kelp in the littoral zone on Porky Beach on 30 March 1969. On 1 December he collected another five (1969/3/15) from the same site. One of these was found to be carrying four half developed embryos. Six were collected by Green on Albatross Island on 19 January 1960.

Copperhead Snake *Denisonia superba*. One (1967/3/42) was collected at Pegarah on 14 December and one adult female (1968/3/2) at Pass River on 20 December. One was killed near Pegarah on 28 September and upon dissection was found to have eaten several metallic skinks.

White-lipped Whipsnake *Denisonia coronoides*. One (1967/3/41) was collected at Pearshape Lagoon on 15 December and one adult female (1968/3/3) at Pegarah forestry reserve on 25 February.

Tiger Snake *Notechis ater*. Rawlinson (1967) lists this snake for King Island and gives literature records. He did not encounter it during his visit and Green similarly has been unsuccessful. McGarvie kills several in his garden at Egg Lagoon every summer. It has been collected on New Year Island and Christmas Island (Rawlinson 1967). When McGarvie visited New Year Island in February 1964 he found it very numerous and counted 58 in a period of four hours, some being up to six feet in length. The largest are mostly completely black and lack the transverse markings which are distinct in the smaller snakes (A.M.McG.).

#### FRESHWATER FISHES

Frankenberg (1967) discusses the galaxiid fishes and lists three species for King Island. The following material has been collected by M.T. Templeton.

Pigmy Perch *Nannoperca tasmaniae*. Pass River, 7 March 1970 (1970/5/11).

Common Jollytail *Galaxias attenuatus*. Porky Creek, 10 March 1970 (1970/5/9).

Spotted Mountain Trout *Galaxias truttaceus truttaceus*. Pass River 7 March 1970 (1970/5/10). Porky Creek 10 March 1970 (1970/5/28).

Cox's Mountain Trout *Galaxias coxi*. From a stream running into Porky Creek September 1970 (1970/5/29).

#### DISCUSSION.

About 164 species of birds have been recorded from King Island and the adjacent waters. They include one introduced Australian and nine introduced non-Australian. Some of these records are doubtful. At least five bird species appear to have been locally exterminated by human predation or habitat alteration.

The Queen Victoria Museum holds about 260 specimens of 56 bird species, which have been collected on King Island (indicated (\*)). An additional 100 bird species (indicated \*) can be regarded as permanent residents or occurring with reasonable regularity. A number of species, not mentioned in this list (especially among the oceanic and wading birds) will undoubtedly be added by further observations and collecting.

In the opinion of the present authors, a total of 156 bird species (including one introduced Australian and nine introduced non-Australian)

can be listed positively as occurring on King Island or the adjacent sea. Eighty-one species of birds have been found breeding in the area (indicated B) and further investigations will probably produce additional records.

Of the fourteen endemic Tasmanian species listed by Ridpath and Moreau (1966), ten breed on King Island. This number includes the recently discovered Scrub Tit (not included by Ridpath and Moreau (1966) in the Bass Strait fauna) and excludes the Forty-spotted Pardalote which appears to have disappeared from the island. As with the Furneaux Islands (Green 1969), the only currawong on King Island is *Strepera fuliginosa*. In Tasmania this endemic bird favours the highland rainforests and its place in the lowland dry sclerophyll is taken by *S. arguta*. It is therefore interesting to find it occurring as the only *Strepera* in Bass Strait and living in a habitat inconsistent with that which it favours in Tasmania.

King Island appears to be the southern extremity of the distribution of several bird species. The Golden-headed Fantail-warbler was reported to be breeding at Springfield in north-eastern Tasmania in 1912 (Fletcher 1913). It has not since been recorded from Tasmania but is relatively common on King Island. The Dusky Moorhen, Masked Woodswallow, White-browed Woodswallow and Yellow-faced Honeyeater, none of which have been known to occur in Tasmania, recently have been found with considerable regularity. The Nankeen Night Heron, rarely seen in Tasmania, is a prolific local breeder and the Nankeen Kestrel likewise rare in Tasmania is regularly seen on King Island.

The mainland Australian influence is more pronounced than is the case with the Furneaux Islands, where the only species not recorded from Tasmania is the Dusky Moorhen (Green 1969). This is unexpected in view of the "stepping stone" islands between Flinders Island and Victoria, compared to the lack of such islands between King Island and Victoria and indicates that, over the relatively short distance involved, such "stepping stones" are of little significance. There are some noteworthy exceptions from the King Island avifauna. We have been unable to find any evidence of the Australian Pelican, yet it occurs round the Tasmanian and Victorian coasts, among the Furneaux Islands and breeds on Forster Island, north-east Tasmania (Green 1969) and on Penguin Island, north-west Tasmania, only about 56 miles south-east of King Island. Likewise the Cape Barren goose, which occurs in considerable numbers in eastern Bass Strait, normally is absent from King Island.

The Masked Owl, Eastern Rosella, Tawny Frogmouth, Owlet Nightjar, Scarlet Robin, Spotted Quail-thrush, Yellow-tailed Thornbill, Striated Field-wren, Southern Emu-wren, Little Wattle-bird, Noisy Miner, Beautiful Firetail and Grey Butcher-bird are not recorded. All are sedentary species which generally prefer a dry sclerophyll or heathland habitat. Except for the Scarlet Robin and Beautiful Firetail, they are also absent from Flinders Island (Green 1969). The predominance, among the sedentary birds, of wet sclerophyll-rainforest species as opposed to dry sclerophyll-heathland species (a phenomenon also evident among the mammals) is evidence that, at the time of recent isolation from Tasmania, King and Flinders Islands supported mostly wet habitat and its associated fauna. From Ridpath and Moreau (1966) this isolation took place at about 11000 years B.P. for King Island and 9000 years B.P. for Flinders Island. The subsequent changes in vegetation to its present form provided a habitat more suited to dry sclerophyll-heathland birds but those species not already present on King Island were then unable (or unwilling) to cross the water barrier. The Scarlet Robin and Beautiful Firetail may have used the "stepping stone" islands to Flinders Island. However it cannot be overlooked that the sedentary dry sclerophyll species occurring there have not flourished as might be expected, in their recently expanded environment. Some appear to have vanished and others are rarer than the closely related wet sclerophyll species which have now invaded the dry habitat.

Two typical examples of this are *M. validirostris*-*M. affinis* and *A. ewingii*-*A. pusilla*. In each case the former, wet sclerophyll, species is the most numerous. Whatever the reason for this, it is possible that it may also

have been responsible for the recent failure of *P. quadrigintus* and *A. tenuirostris*.

The Reed Warbler, a migrant to Tasmania from the Australian mainland, has never been found on King Island or Flinders Island. The absence of some wader and seabirds from the list is surely due, in part, to the lack of observers.

Several species have disappeared from the island since the arrival of white man. Most notable is the King Island Emu, the original occurrence of which is surprising in view of what appears by present standards to have been un-emu-like habitat at the time of isolation. However, from the little information available, it is apparent that the King Island Emu had evolved better suited to inhabiting thick bush than any of the other emu species; that is, smaller, stockier, with shorter legs and much less dependent on speed. Thus it may well have paralleled the evolution of the Cassowary in northern rainforests. The extinction of this bird undoubtedly was due to direct human predation. The early record of the Ground Parrot on Flinders Island (a species now absent, see Green 1969 no. 311) is further evidence of the presence at the time of isolation of wet sedgeland, a habitat occurring adjacent to rain forest in Tasmania and favoured by this parrot. This record could represent the last of a once greater population which disappeared from the Bass Strait islands with the gradually changing environment (Ridpath and Moreau 1966).

At least two Victorian species dependent upon eucalypt forest have disappeared since the beginning of the last century apparently due to habitat alteration. They are the Red-tailed Black (or Glossy) Cockatoo and the Gang Gang Cockatoo, species which do not occur on the Tasmanian mainland.

The Eastern Spinebill is now very rare, if not locally extinct, and the Brown Thornbill has been found only once (see no. 475) since 1902. Both these species appear to have declined significantly this century but neither predation or habitat alteration can be attributed directly as the cause.

Population increases have occurred among species favouring the open grassland. This is due directly to clearing and pastoral development, the Spurwing Plovers and Banded Plover being the most notable. Likewise the White-backed Magpie, introduced from Victoria about 1910, has since flourished with pastoral development and is far more densely populated today than it is in Tasmania, where it appears to have decreased during this century despite an apparently more suitable environment.

Almost without exception the introduction of non-Australian birds has resulted in their permanent establishment and a spectacular increase in numbers.

We have been unable to find breeding records of Grass Parrots, Swift Parrot, Woodswallows, Black-faced Cuckoo-shrike or Satin Flycatcher and these appear to be transitory migrants, as is their appearance on Flinders Island (Green 1969).

There is no recorded evidence that aborigines ever occupied King Island (pers. com. W. F. Ellis.).

During the winter and early spring of 1969 about 70 specimens, comprising 17 species of beachwashed sea birds were salvaged by Templeton on the west coast of King Island and sent to the Queen Victoria Museum (Templeton 1970). About half of these had a solidified oily substance adhering to their feathers. In some instances it did not appear to be sufficiently heavy to have been the prime cause of death but ingestion of the substance with food or when feather preening, may have caused death in some cases. Templeton informed us that he found some carcasses almost completely encased in solidified oil. These specimens and some Short-tailed Shearwaters and Little Penguins which also occurred in



the wreck were not salvaged and are not included in the above figures.

A similar wreck occurred at the same time on the east coast of Flinders Island (Green 1971) and several beachwashed prions were found near the mouth of the Tamar River with oil on their feathers. There has been no report from the region of live birds with oil impregnated plumage and deaths appear to have occurred at sea and the carcasses later washed up on the beaches. The source of the oil has not been traced. The winter of 1970 produced fewer beachwashed birds in Bass Strait and except for one minor instance, oiling of the plumage was not discernible.

The recent acquisition and proclamation as a sanctuary of an area of 3800 acres near Lake Martha Lavinia to Sea Elephant, including the area known as The Nook (described under "Habitat") is commendable. It is ideal for this purpose and will be increasing value in the years to come. Big Lake, in the south, is a fine stretch of water with, good shoreline vegetation and adjoining swampland. This, together with some nearby lagoons, is used by many water birds as a breeding and feeding area and could provide an excellent water fowl reserve.

There are several small private sanctuaries on the island but, though these are well cared for under present ownership, their permanence is doubtful because of possible commercialisation under future ownership. The increase in land development and mining activities make it imperative to secure further reserves soon.

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## APPENDIX

The following list of gut contents has been compiled from King Island material. The date applies to 1968, except where otherwise stated. The samples listed may or may not include material taken from more than one bird.

Brush Bronzewing	20 February SAND SEEDS: 1 <i>Acacia</i> sp. 30 <i>Trifolium subterraneum</i> 6 <i>Sueda australis</i> 130 <i>Beyeria</i> sp.? 2 Cyperaceae
Brush Bronzewing	27 February GRIT 3 SEEDS: c. 400 <i>Trifolium</i> sp.
Eastern Swamphen	17 September 1969 Grass fragments
Green Rosella	26 February SEEDS: c.300 ? Euphorbiaceae
Green Rosella	26 February SEEDS: c.250 <i>Rumex</i> sp. c. 50 <i>Solanum</i> sp. c. 50? <i>Pimelea</i> sp.
Green Rosella	26 February SEEDS: c.300 ? Euphorbiaceae
Green Rosella	27 February SEEDS: c.2000 ? <i>Senecio</i> sp.
Fan-tailed Cuckoo	21 March remains 3 Elateridae (click-beetles) remains 8 Lepidoptera (moth) remains 3 Diptera pupae (fly-pupae) remains 1 Araneida (spider) remains 1 Chilopoda (small centipede)
Fan-tailed Cuckoo	23 February remains 1 Blattidae (cockroach) remains 1 Lepidoptera larva (caterpillar) remains c.20 Lepidoptera (small moth) remains 1 <i>Telephorus</i> sp. (soldier beetle)
Fan-tailed Cuckoo	27 August 1969 remains of hairy caterpillars Amycterinae (ground weevils) Mammal skin with hair.

- Golden Bronze-Cuckoo 25 February  
remains of 9 Lepidoptera larvae (caterpillar)
- Grey Fantail 21 February  
remains 2 Staphylinidae (rove-beetles)  
remains 2 Pentatomidae (shield bugs)  
remains 4 Muscoidea (flies)  
remains 2 Chrysomelidae; *Monochirus*  
? *mutispinosus* (leafbeetle)
- Satin Flycatcher 26 February  
remains 2 Cicadidae (cicadas)  
remains 2 Araneida (spiders)
- Satin Flycatcher 27 February  
GRIT 2  
SEEDS:  
1 Liliaceae  
102 *Acacia* sp.
- Flame Robin 26 February  
remains of 6 *Telephorus* sp. (soldier beetles)
- Dusky Robin 20 February  
traces only of Formicidae (ants)  
Scarabaeidae (chafers)  
Curculionidae (weevils)  
Orthoptera (grasshoppers)
- Dusky Robin 20 February  
remains 1 Lepidoptera larva (caterpillar)  
remains 7 Tenebrionidae (blackbeetles)  
remains 2 Curculionidae (weevils)  
remains 1 Scarabaeidae (chafer beetles)  
remains 2 Carabidae (ground beetles)  
SEEDS:  
1 unknown
- Dusky Robin 21 February  
remains 1 Tenebrionidae (black-beetle)  
remains 2 Coprinae (dungbeetles)  
remains 1 Gryllacrididae (tree-cricket)  
remains 1 Lucanidae (stag-horn beetle)  
remains 1 Carabidae (groundbeetle)  
remains 3 Formicidae (ants)  
remains 2 Scorpionidae (scorpions)  
remains 1 Diplopoda (millepede)
- Dusky Robin 27 February  
remains (traces only) Formicidae (ants)  
remains 1 Lucanidae (staghorn-beetle)
- Dusky Robin 28 February  
remains 1 Carabidae (groundbeetle)  
remains 3 Curculionidae (weevils)  
remains 1 Lepidoptera larva (caterpillar)
- Olive Whistler 20 February  
8 GRIT + SAND  
remains 1 Curculionidae (weevil)  
remains 2 Cerambycidae (longicorn beetles)

	SEEDS: 2 Epacridaceae 1 Leguminosae 4 Unknown
Olive Whistler	22 February GRIT + SAND remains 1 Syrphidae (hover-fly) SEEDS: 6 Epacridaceae
Olive Whistler	26 February remains 1 Syrphidae (hoverfly) SEEDS: Unknown
Olive Whistler	27 February PLANT: 1 leaf fragment SEEDS: 6 Unknown
Olive Whistler	27 February remains of 12 Curculionidae (weevils) remains of 1 Blattidae ootheca (cockroach egg-capsule)
Grey Shrike-thrush	20 August 1961 remains 1 Phaladurinae (ground-weevil) remains 7 Curculionidae (weevils) remains 4 Pentatomidae (shieldbugs) remains 1 Dytiscidae (water tigerbeetle) remains 1 Hydrophilidae ( a waterbeetle)
Grey Shrike-thrush	21 February remains of few small bird bones (unidentifiable) remains 3 Coprinae (dungbeetles) remains 12 Dermaptera, mainly <i>Forficula auricularia</i> (introduced earwig)
Grey Shrike-thrush	21 February remains 9 Dermaptera (earwigs) remains 4 Ichneumonidae (parasitic wasps) remains 2 Curculionidae (weevil)
Grey Shrike-thrush	22 February remains of <i>Hyla ewingii</i> Brown Treefrog
Grey Shrike-thrush	23 February remains Scincidae (remains skink lizard, some bone only) remains 2 Coprinae (dungbeetles) remains 2 Tettigonidae (longhorned grasshoppers) remains 3 Lepidoptera (moths)
Grey Shrike-thrush	26 February remains of Lepidoptera (moth) remains 3 <i>Iridomyrmex</i> (ants)
Black Faced Cuckoo-shrike	27 February remains 1 Lepidoptera (moth) remains 3 <i>Paropsis</i> sp. ( leafbeetles)

- remains 1 Cerambycidae (longicorn beetle)
- Black-faced Cuckoo-shrike 29 February  
remains 1 Lepidoptera (moth)  
remains 1 Curculionidae (weevil)  
remains 1 Hymenoptera (trace of wasp)
- White-winged Triller 11 October  
remains 1 Noctuidae larvae (caterpillar)  
remains 2 Araneida (spiders)  
remains c.4 Lepidoptera (moths)
- Australian Ground-thrush 21 February  
remains 1 small Dynastinae (chafer)  
remains 1 Curculionidae (weevil)  
remains 12 Elateridae larvae (click beetle)  
remains 1 Carabidae (ground  
beetle)  
remains 9 Diptera larvae (fly maggots)  
PLANT:  
c.40 ? Epacridaceae leaves
- Australian Ground-thrush 23 February  
SAND  
remains 2 Coprinae (dung beetles)  
remains 2 Tenebrionidae (blackbeetles)  
remains 1 Elateridae Larva (click beetle larva)  
remains 2 Diptera larvae (fly maggots)  
remains Oligochaeta (earthworms)  
PLANT:  
15 leaves Epacridaceae
- Australian Ground-thrush 27 February  
remains 4 Elateridae larvae (clickbeetle-  
larvae)  
remains 1 Carabidae (groundbeetle)  
remains 4 Lepidoptera larvae (caterpillars)  
remains 1 Chilopoda (centipede)
- Brown Scrub-wren 20 February  
GRIT 19  
remains Curculionidae (weevils)  
remains 1 Blattidae ootheca (cockroach egg-  
capsule)  
SEEDS:  
1 Chenopodium sp.  
5 twig fragments  
1 Cyperaceae  
1 Roseaceae
- Brown Scrub-wren 22 February  
remains 4 Lepidoptera (moths)  
remains 1 Diptera larva (fly-maggot)
- Brown Scrub-wren 25 February  
remains 1 Blattidae ootheca (cockroach egg-  
capsule)  
remains 2 Lepidoptera (moth)  
remains 1 Cerambycidae (longicorn beetle)  
SEEDS:  
4 ? *Myosotis* sp.  
1 *Epacris* leaf

- Brown Scrub-wren  
26 February  
GRIT 3  
remains 1 Lepidoptera (moth)  
remains 1 Blattidae ootheca (cockroach egg-capsule)  
remains Isoptera (termites)  
remains 6 Formicidae (ants)  
SEEDS:  
1 ? Euphorbiaceae  
2 Leguminosae  
2 fragmented seeds unidentifiable
- Golden-headed Fantail-warbler  
22 February  
remains 2 Pentitomidae (shieldbugs)  
remains 4 Tettigonidae (longhorned-grasshoppers)
- Superb Blue Wren  
20 February  
remains 2 Curculionidae (weevils)  
remains 19 *Iridomyrmex* sp. (ants)  
remains 2 Coprinae (dungbeetles)
- Superb Blue Wren  
22 February  
remains of 2 Curculionidae (weevils)  
remains 29 Formicidae (earwigs)  
remains 1 Lepidoptera (moth)  
remains 1 Diptera larvae (fly-maggot)
- Grey-breasted Silvereve  
22 February  
SEEDS:  
18 *Rhagodia baccata*  
1 *Solanum* sp.
- Strong-billed Honeyeater  
23 February  
remains 1 Lepidoptera (moth)  
remains 4 Araneida (spiders)  
remains 2 Telophoridae, *Telephorus* sp.  
(soldier-beetles)  
remains 1 Carabidae larva (ground-beetle larva)  
remains 1 Lepidoptera larva (caterpillar)  
remains 1 Tenebrionidae (black-beetle)  
PLANTS:  
6 leaf fragments: Epacridaceae
- Strong-billed Honeyeater  
25 February  
remains 6 Blattidae ootheca (cockroach egg-capsules)  
remains 1 Lepidoptera (moth)  
remains 1 Formicidae (ant)  
remains 1 Cerambycidae (longicorn-beetle)  
remains 3 Araneida (spiders)
- Strong-billed Honeyeater  
26 February  
remains 1 Scarabaeidae (chafer)  
remains 1 Curculionidae (weevil)  
remains 37 Dermaptera *Labidura riparia* and  
*Forficula auricularia* (earwigs,  
the second species introduced)



- Strong billed Honeyeater 26 February  
 remains 4 Blattidae ootheca (cockroach  
 egg-capsules)  
 remains 3 Formicidae (ants)  
 remains 4 Araneida (spiders)  
 remains 2 Carabidae (groundbeetles)  
 remains 1 Pentatomidae (shield-bug)  
 remains 2 Lepidoptera larvae (caterpillars)  
 remains 1 Chrysopidae larva (lace-wing larva)  
 remains 1 Pseudoscorpionidae (pseudo-  
 scorpion)
- Strong billed Honeyeater 28 February  
 remains 2 *Myrmecia* sp. (ants)  
 remains 1 Blattidae ootheca (cockroach egg-  
 capsule)  
 remains 1 Diptera (fly)  
 remains 2 Curculionidae (weevils)  
 remains 2 *Papopsis* sp. (leafbeetles)  
 SEED:  
 1 *Acacia* sp.
- Yellow-throated Honeyeater 20 February  
 remains 3 Lepidoptera (moths)  
 remains 1 Araneida (spider)
- Yellow-throated Honeyeater 27 February  
 remains 5 *Telephorus* sp. (soldierbeetles)  
 remains 1 *Paropsis* sp. (leafbeetle)  
 remains 1 Curculionidae (weevil)  
 remains 1 Buprestidae (jewelbeetle genus:  
*Stigmodera*)
- Yellow-throated Honeyeater 27 February, 1967  
 remains 3 Curculionidae (weevils)  
 remains 2 *Telephorus* ? *pulchellus*  
 (soldierbeetle)  
 remains 2 Cerambycidae (longicornbeetles)
- Crescent Honeyeater 20 February  
 remains 1 Diptera (Muscoidea) (fly)  
 remains (trace) Lepidoptera (moth)
- New-holland Honeyeater 20 February  
 remains of 4 Araneida (spiders)  
 remains 2 Ichneumonidae (parasitic wasps)  
 remains 3 Curculionidae (weevils)  
 remains 1 Lepidoptera (moth)
- New-holland Honeyeater 21 October  
 trace of Diptera (flies)  
 trace of Coleoptera (beetles)
- Yellow Wattle-bird 23 February  
 remains 2 Ichneumonidae (parasitic wasps)  
 remains 1 Coprinae (dungbeetle)  
 remains 3 *Telephorus* sp. (soldierbeetle)  
 remains 1 Bombylidae (bee-fly)

- Yellow Wattle-bird  
23 February  
remains 5 Apidae (bees)  
remains 1 Pentatomidae (shieldbug)  
SEEDS:  
10 *Chenopodium* sp.  
68 *Tetragonia implexicoma*
- Black Currawong  
15 December 1967  
remains 1 *Paropsis* sp. (leafbeetle)  
remains 1 Scarabaeidae (chafer)  
remains 22 Curculionidae (weevils)  
remains c.56 *Paropsis* sp. larvae (leaf  
beetle larvae)  
SEEDS:  
c.200 Epacridaceae
- Black Currawong  
24 February  
remains 6 Gryllidae (crickets)  
remains 27 small Scarabaeidae (chafers)  
remains 2 Lepidoptera (moth)  
remains 2 Formicidae (ants)  
remains 2 Elateridae (clickbeetles)
- Skylark  
22 February  
remains 2 Acrididae (grasshoppers)  
remains 4 Formicidae (ants)  
SEEDS:  
12 *Trifolium* sp.  
1 Epacridaceae leaf  
GRIT c. 40
- Californian Quail  
22 February  
SAND:  
14 *Geranium molle*  
14 *Trifolium subterraneum*  
1 *Vulpia* sp.  
55 *Lolium perenne*  
1 *Trifolium fragiferum*  
1 *Trifolium dubium*  
c.50 ? *Teucrium corymbosum*  
7 *Bromus* sp.  
4 *Medicago lupulina*  
7 *Trifolium* sp.  
6 *Holcus lanatus*
- Californian Quail  
26 February  
GRIT 2  
89 *Danthonia penicillata*  
20 *Anagallis arvensis*  
3 *Scirpus* sp. seedheads  
28 Compositae flower heads (immature)  
184 *Poranthera microphylla*  
1 *Phalaris* sp.

